

STATE OF
COLORADO

Czapla - DNR, Dustin <dustin.czapla@state.co.us>

M1990-057 CN01 | Objection Letter Responses

1 message

Nick Michael <nmichael@unionmilling.com>

Wed, Sep 8, 2021 at 3:07 PM

To: Dustin Czapla - DNR <dustin.czapla@state.co.us>

Cc: GARY KNIPPA <GKNIPPA@msn.com>, Steve Craig <scraig@unionmilling.com>, Stephanie Michael <smichael@unionmilling.com>, George Robinson <grobinson@unionmilling.com>, Nick Michael <nmichael@unionmilling.com>

Hi Dustin,

Please see attached a cover letter addressed to you confirming response to the Objection Letters and the Objection Letters prepared by Union Milling Contractors on behalf of CJK.

Let us know if you have any questions.

Cheers,

Nick Michael

Union Milling Contractors

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nmichael@unionmilling.com

10 attachments**00 20210908__M1990-057_112(d)CDRMSCoverLetterObjections.pdf**

64K

**03 20210908__Bob Gray Objection M-1990-057 CN01 Response.pdf**

287K

**02 20210908__Bill Dvorak Objection M-1990-057 CN01 Response.pdf**

287K

**01 20210908__BFW Citizens Objection M-1990-057 CN01 Response.pdf**

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**04 20210908__Hayden Mellsop Objection M-1990-057 CN01 Response.pdf**

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**05 20210908__Jerry Wright Objection M-1990-057 CN01 Response.pdf**

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**06 20210908__Reed Dils Objection M-1990-057 CN01 Response.pdf**

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**07 20210908__Rick Helmick Objection M-1990-057 CN01 Response.pdf**

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**08 20210908__Michael Irwin & Lake County Government Objection M-1990-057 CN01 Response.pdf**

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**09 20210908__Leadville Sanitation District M-1990-057 CN01 Response.pdf**

318K

CJK Milling Company LLC

33084 Bergen Mountain Road
Evergreen, Colorado 80439

VIA EMAIL

8 September 2021

Dustin Czapla
Division of Reclamation, Mining and Safety
Department of Natural Resources
1313 Sherman St., Room 215
Denver, CO 80203
Ph: 303-866-3567
dustin.czapla@state.co.us

RE: M1990-057 | Objection Responses

Dear Dustin,

CJK Milling Company LLC (CJK) has received the 9 objection letters via your email dated 26 August 2021.

Attached are individual responses prepared by Union Milling Contractors for CJK.

Let us know if you require additional information to assist in your process. Please contact me at 303-877-9701 or scraig@uniionmilling.com if I can be of assistance.

Sincerely,
FOR CJK MILLING COMPANY LLC

[signed]

by:
Steven Craig
Member, Union Milling Contractors

VIA EMAIL

8 September 2021

Mr. Scott Clark
Burns Figa & Will
6400 S. Fiddler's Green Circle, Suite 1000
Greenwood Village, CO 80111

RE: M1990-057 | Objection Responses

Dear Concerned Citizens and Mr. Clark,

CJK appreciates the well-thought-out questions you have presented. Also, CJK invites the Concerned Citizens and their counsel to meet with CJK to tour the mill and mining areas, and to discuss concerns in person.

Following are responses to your objections.

Objection 1: Discharges of Toxic and Acidic Materials

The proposed new process will utilize toxic and acidic materials, which could be discharged into the environment, and which will be disposed of on-site in a disposal pit. These materials will include sodium cyanide, sodium bisulfite, copper sulfate, lead nitrate, zinc oxide, borax, diesel fuel, and other chemicals. (Mining Plan § 4.2.4 at 4-10 thru 4-12.) An operation that relies upon, and ultimately disposes of, these chemicals, sodium cyanide in particular, should not be permitted so close to residential properties and drinking water wells.

CJK: It is important to note that CJK's operating plan is one of environmental reclamation, not mining. CJK has no intention to operate a conventional mine. Material that will be treated is that which was mined in the late 19th and early 20th centuries and deposited on the surface as waste. This material still exists on the surface through the historic California and other mining districts in Lake County and remains an active part (Operable Unit 6) of EPA's California Gulch Superfund site.

Surface run-off from these dumps contribute to acid drainage in surface waters. Placement of dump material in a properly designed Tailings Storage Facility (TSF) reduces acid-metal loads to the environment. CJK is initiating an EPA-accepted remediation activity.

The historically mined material contributes metal loading to Leadville's groundwater. See Leadville EPA Superfund Site-OU3 Documentation. See **Figure 1**. This figure shows; (1) potentially contaminated groundwater (area shaded light red), (2) water wells within 2 miles (circle) of the Mill (green are residential, and gray are wells monitored by EPA), and (3) the groundwater flow gradient.

CJK will be processing and disposing treated (lime) acid-generating material. In addition, residual cyanide will be destroyed prior to tailings disposal in a lined, engineered and designed structure. Cyanide will be detoxified prior to processed material being disposed.

The Leadville Mill is permitted (2011) as a zero-discharge facility. The tailings storage facility (TSF) is designed to contain all tailings materials using a double lined leak detection system. In the unlikely event leakage occurs, the captured water will be pumped to the TSF.

The material in the TSF will be basic with a pH of 11. Agitated leaching using cyanide (CN) requires the process to condition the material to make it basic (opposite of acidic, or high pH) by adding lime (or soda ash). High pH also prevents CN from becoming gaseous, a critical criterion for safe operation and dissolved metals of concern are precipitated

The mill was constructed in 1989 and it is public knowledge that it is in Lake County's Industrial Mining (IM) zone.

Cyanide, the principal process chemical for the proposed operation, is deemed "extremely toxic to humans" by the United States Environmental Protection Agency ("EPA") This text continues but is not repeated here.

CJK: CJK shares your concern for the environment, and like all modern natural resource operations will take great care to protect it. This will be accomplished in 3 basic steps:

Step 1: Cyanide Handling.

CJK acknowledges the hazards related to CN, sodium bisulfate, as well as other chemicals. The handling and use of these chemicals are common in mining operations, and its safe use to the environment and human safety is highly regulated by State (Colorado Department of Reclamation Mining and Safety-CDRMS, Colorado Department of Health and the Environment-CDPHE) as well as federal (Mining Health and safety Administration-MSHA). Cyanide will be destroyed, and metals of concern will be treated using the lime used in the milling process. CJK is required by law to comply with all regulations associated with the handling and use of hazardous materials and will do this using industry-proven method.

Step 2: Cyanide Destruction.

Most of the CN used in the process is reclaimed and re-used. However, the CN that cannot be reclaimed will be destroyed using ferric sulfite prior to disposal in the TSF. The cyanide detoxification process is an industry-proven method. CN concentration in the TSF will be at a safe level, on the order of 1 parts per million (ppm).

Step 3: Zero Discharge Facility.

The Leadville Mill was designed and permitted as a zero-discharge facility. No CDPHE discharge permit is required. Any discharge from the tailings dam is a CDPHE violation.

Objection 2: Mining Plan

Article 4.0 of the Application contains the Mining Plan. The Mining Plan provides little understanding of how material will be managed and moved through the Mill and into the disposal pit. If the Application is not denied, the Concerned Citizens request that the Board require the Applicant to provide a detailed explanation of the flow of material through the Mill, including identification of each piece of equipment and the manner of conveyance between each step.

CJK: The process flow sheet and description are presented in detail in the permit application and the attached Figure¹ 2.

¹ CDRMS Permit Submittal (M1990-057) Rule 6.4.4 Exhibit D Figure 4-1

4.2 Mill Management Activities specific comments:

Purportedly, process water will go to a sump, but the Application is not clear as to where that sump is, other than within the Mill. (Mining Plan at 4-9, Table 4-5.) The Mining Plan indicates that the sump can deliver material to the disposal pit, but the text is ambiguous. The Applicant should be required to explain and provide engineered drawings of the sump and the means by which it delivers materials to the disposal pit. In addition, the sump and related conveyances should be engineered to prevent seepage to the environment. Those controls should be clearly identified and explained.

CJK: Mill Building and Leach Tank Area Sump and pumps can be thought of as surge tanks that catch process water allowing pumps to recirculate solution back into the process or to the TSF. The mill facility is designed to contain enough volume to accommodate 150% of all solution in the process system.

As built drawings will be provided to the Concerned Citizens upon request once Application is approved, and plant construction is completed.

22.88 tons per hour of process water will be sent to the sump. (Id.) Applicant should identify the rate of process water delivery to the sump in gallons per minute and provide an explanation as to how the sump can handle that rate of flow.

CJK: One ton water per hour (tph) is 4.4 gallons per minute, so 22.88 tph flow is approximately 101 gallons per minute (gpm). This maximum value is well within the range of commercially available water pumps.

The Mining Plan states that “The reagent mixing area is at the fine ore bin level.” Applicant should be required to describe the containers in which reagents will be mixed and how those containers will be managed to prevent leaks and spills.

CJK: Containers for reagent storage will be overpack containers designed to contain reagents with a 50% safety factor per SDS and CDRMS guidelines.

“Any spillage not cleaned up at the source will be washed down to the sump.” (Mining Plan § 4.2.5 at 4-13.) Applicant should be required to identify the type of surface across which spillage will be washed down. That surface, and the sump surfaces, should be required to be sealed to prevent seepage. Applicant should be required to inspect those sealed surfaces regularly and to repair any cracks or other damage that might compromise the seal or otherwise allow seepage. In addition, Applicant should identify any vertical controls that will prevent spilled materials from escaping the building and explain how the materials are sufficient to prevent seepage.

CJK: See above discussion. CJK will include the recommendation in the maintenance schedule.

All spilled chemicals will be delivered to the disposal pit. (Id.) Applicant should be required to provide analysis of the interaction of process chemicals and wastes and how they might react when combined in the disposal pit.

CJK: In most instances, any spillage will not be delivered to the TSF, but will be recycled back into the process. The interaction of all reagents on site will be used in the process. The proposed process is well-understood and used in many gold operations in the US. CJK agrees to this recommendation and can provide this information upon request.

The sump is represented as being secondary containment for all tanks and facilities used in operations. (Id.) However, the “sump area can hold about 5,000 gal of the tanks and facilities located within the mill building.” 5,000 gallons is nowhere near sufficient to constitute secondary containment. Under the Clean Water Act, secondary containment must be sufficient to capture the entire capacity of the largest single container. 40 C.F.R. § 112.8(c)(2) and (11) (Spill Prevention, Control, and Countermeasures Plan requirements). Each cyanide leach tank has a capacity of 68,500 gallons. And the Applicant will operate four of those tanks. A spill from any one of the leach tanks would completely overwhelm the sump. Thus, the Mining Plan, as proposed, does not include secondary containment, yet the Applicant proposes to operate massive tanks of sodium cyanide next door to residential properties and drinking water wells. At a minimum, Applicant should be required to provide secondary containment sufficient to contain the full capacity of its largest vessel.

CJK: See above discussion.

The Application lists multiple sumps that will be in use. (Table 4-10.) It is not clear how these sumps will be used, where they are or will be located, where they all pump to, how they are constructed, what types of materials might be captured by each sump, or whether any of these sumps are sealed. Applicant should be required to provide that information and to assure that all surfaces of every sump are sealed to prevent seepage.

CJK: See Figure 2 schematic flow sheet and above discussion. CJK agrees to this recommendation and can provide this information upon request.

The disposal pit is large enough to hold all of the process water and chemicals that would be at the Facility at any one time. So, in the event that all of the equipment and containers release their contents, the materials could be sent to the disposal pit. (Id.) However, the Mining Plan contains no demonstration that the sump is capable of pumping a release from the largest vessel, along with all the process water sent to in the normal course of operations, without overflowing. Applicant’s proposed secondary and tertiary containment systems are a recipe for disaster. For this reason alone, the Application should be denied.

CJK: See above discussion.

The Mill will have a laboratory. (Mining Plan § 4.2.3 at 4-10.) The Application does not describe how laboratory samples and chemicals will be disposed of. Presumably, they will go into the disposal pit, but there is no discussion of laboratory wastes, how they will be handled, or whether they are compatible with other wastes that will go into the disposal pit. Applicant should be required to identify the laboratory wastes and demonstrate that they are compatible for disposal in the pit with all other wastes.

CJK: Laboratory reagents used in the laboratory will be the same as those used in the mill process and also include small amounts of acids. These wastes will be disposed in accordance to SDS guidelines. CJK agrees to this recommendation and can provide this information upon request.

4.3 Tailings Storage Facility specific comments:

The Tailings Storage Facility is a disposal pit where milling waste will be deposited for eternity. The disposal pit is designed to have a geosynthetic clay liner with a permeability of 1×10^{-6}

cm/sec and a 45-mil polypropylene liner with a seepage/leak detection system between the clay liner and the polypropylene. The seepage/leak detection system will cause any liquids that leak through the polypropylene to flow to a sump, where leakage can be observed, and any leakage will be pumped back into the disposal pit. (Mining Plat § 4.3 at 4-21.).

CJK: The TSF design as currently under construction was reviewed and approved by CDRMS in 2011 (See CDRMS 2011 permit (M1990-57) and Lake County Use Permit- CUP (11-07).

DRMS has no regulatory standards for disposal pits such as the one proposed. However, the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, which regulates hazardous and solid waste disposal facilities, has specific design criteria for landfills, waste impoundments and oil and gas production waste ponds. While excluded from the RCRA definition of “hazardous waste” by virtue of the mining activity, sodium cyanide and other chemicals to be used at the Mill are in fact deemed hazardous wastes. The RCRA mining exclusion makes them no less hazardous to human health and the environment, and the requirements for disposal facilities receiving those wastes at a mill site should be no less protective than RCRA requirements.

CJK: CDRMS is best suited to provide comment on this issue.

Hazardous waste regulations require a top liner designed to contain the hazardous constituents and a composite bottom liner consisting of an upper component designed to contain the specific waste and a lower component consisting of 3 feet of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec. 6 CCR 1007-3, §§ 264.221(c), 264.301(c). The solid waste regulations require a clay liner with a hydraulic conductivity of at least 1×10^{-7} cm/sec and a 60-mil polypropylene layer. 6 CCR 1007-2, Part 1 §§ 9.3.1(B) and 17.3.1(A)(2). The hazardous waste and solid waste regulations also contain more robust standards for leachate collection and leak detection than Applicant has proposed.

CJK: CDRMS is best suited to provide comment on this issue.

In addition, Applicant has not adequately evaluated the stability of the disposal pit. DRMS Rule 6.5 requires an analysis that confirms off-site areas will be safe. 2 CCR 407-1, Rule 6.5(3). The analysis must include evaluation of the consequences of a failure and the potential for seismic activity. The Application includes a ten-year-old stability evaluation report (Appendix 22-5), but cyanide leaching was not part of the plan at that time. Applicant should prepare a new stability analysis that takes current conditions into account and that includes cyanide and other wastes in the risk analysis.

CJK: CDRMS is best suited to provide comment on this issue.

Because the proposed disposal pit design falls short of the standards for both hazardous and solid waste facilities, but will receive highly toxic wastes, the Concerned Citizens request that the Board deny the Application. If the Board elects to approve the Application, the Concerned Citizens request that the permit include terms requiring disposal pit design and operations consistent with the hazardous waste surface impoundment regulations. Applicant also should be required to undertake a new stability analysis.

CJK: CDRMS is best suited to provide comment on this issue.

Objection 3: Environmental Protection Plan

The Environmental Protection Plan (“EPP”) asserts, under the heading “Chemical Handling during Temporary Cessation or Closure”, that “reagents will be either sold, recycled, or disposed of at an approved facility.” (EPP at 21-11.) This term should be clarified to require disposal only at off-site permitted facilities. Leftover reagents should not be dumped into the disposal pit.

CJK: CJK agrees to this recommendation.

Run-of-mine ore will be located on a pad that is “designed . . . to contain potential ore leachate from entering the environment.” (EPP at 21-11.) Applicant should be required to provide design specifications for this pad that clearly demonstrate how leachate will be contained.

CJK: CJK agrees to this recommendation.

Purportedly, the disposal pit will contain spills that breach the mill building, (EPP at 21- 12), but there is no explanation of how spills that breach the building, and thus evade the sump, will reach the disposal pit. There should be a clearly defined means of preventing these spills from entering the soil, groundwater, and surface water.

CJK: CJK agrees to this recommendation.

In several places, the Mining Plan and the EPP assert that only “small quantities” of chemicals will be used at any given time. This statement needs to be explained in greater detail. It is not clear whether Applicant intends to include chemicals in vats, such as the leach vats, as “in use.” The Applicant proposes to use almost a ton of sodium cyanide every day. That is not a small quantity of a highly toxic chemical and does not justify a claim of environmental management by use of only “small quantities” of chemicals. In fact, Applicant should be required to develop detailed plans for how sodium cyanide, and the resulting cyanide waste, will be managed. Moreover, the plan should specify the maximum amount of each hazardous chemical that will be permitted as throughput in the system.

CJK: CJK agrees to this recommendation.

As discussed above, the EPP does not include any capacity to contain the volume of the single largest vessel on site. Secondary containment that can contain the full volume of the largest single vessel should be required.

CJK: Each structure will have the capacity to contain the volume of the largest vessel within it. CJK agrees to this recommendation and will make this clear.

Acidic and toxic waste material will be dumped into the disposal pit, including any contaminated debris and fluids from spills. (EPP § 21.7.5 at 21-15.) Wastes will include ore brought from sources within the California Gulch Superfund site that are acid producing that contain arsenic, lead and other hazardous constituents. Applicant should be required to provide analysis of the compatibility of these wastes and every other waste that will be placed into the disposal pit. Applicant also should be required to demonstrate the compatibility of the liner material with the wastes to be deposited into the disposal pit.

CJK: CJK is in agreement with this recommendation. CDRMS may comment on the permitted liner compatibility in its ongoing Application review.

The proposed amended EPP strikes out a term stating that “Prior to constructing future containment structures that will contain toxic or hazardous materials; a geological or geotechnical fracture investigation will be undertaken.” (EPP § 21.8.3 at 21-16.) Applicant proposes to use and dispose of toxic and hazardous materials on the site within a few hundred feet of drinking water wells. Before a new permit is approved, Applicant should be required to undertake a fracture investigation, and a permit should not issue unless it is demonstrated that there is no risk of a fracture that could compromise the disposal pit.

CJK: CJK is committed to best practice engineering This was struck out since the current TSF is already permitted by CDRMS. Future Amendments for TSF expansions will certainly require proper investigations to support the designs.

Objection 4: Reclamation Plan

The Reclamation Plan asserts that a “cyanide detoxification process” will be implemented prior to discharge of chemicals to the disposal pit. (Reclamation Plan § 5.4 at 5-4.) The Application contains no discussion of this detoxification process. Applicant should be required to provide a detailed description of the detoxification process and how this process will apply to prevent any cyanide from entering the disposal pit, including detoxification of any waste, spilled material, and contaminated objects.

CJK: CJK is in agreement with this recommendation.

The Reclamation Plan calls for a disposal pit cap consisting of 8 inches of embankment material, 4 inches of topsoil, and 4 inches of plant growth material. (Reclamation Plan § 5.4 at 5-4 to 5-5.) No minimum cap hydraulic conductivity is specified and no engineered drawings of the cap are provided. Applicant should be required to place a cap on the disposal pit that is no less permeable than the liner, as required for solid and hazardous waste facilities. (6 CCR 1007-2 § 3.5.3 (solid waste landfills); 6 CCR 1007-3 § 264.228(a)(2)(iii) (hazardous waste impoundments).)

CJK: The existing criterion has been approved in the current reclamation plan. CDRMS is best suited to opine on this recommendation for the current TSF.

The Reclamation Plan states that tailings in the disposal pit will be geochemically characterized prior to capping. (Id. at 5-5.) However, the Plan does not identify any criteria that must be met prior to capping. Applicant should be required to satisfy specific waste criteria, including that absence of cyanide and a neutral pH, in the disposal pit before the pit can be capped.

CJK: The existing criterion has been approved in the current reclamation plan. CDRMS is best suited to opine on this recommendation for the current TSF.

Applicant should be required to place an environmental covenant on the Property upon closure of the disposal pit.

CJK: The approved post mine land use is described in the existing permit.

Applicant should be required to provide the Board notice of closure of the disposal pit and should be required to monitor the disposal pit, including monitoring the leachate detection system and sampling monitoring wells, for at least 30 years after closure, as required for solid or

hazardous waste impoundments. (6 CCR 1007-2 § 9.3.6. and .7 (solid waste); 6 CCR 1007-3 § 264.228(b) (hazardous waste).)

CJK: The existing criterion has been approved in the current reclamation plan. CDRMS is best suited to opine on this recommendation for the current TSF.

Objection 5: Zoning

The Application inaccurately states that the neighboring lands to the west and south are zoned Industrial/Mining (IM). (Legal Description § 1.1.3 at 1-1.) The neighboring lands to the west are zoned Agriculture and Forestry (AF) and are in residential use by members of the Concerned Citizens, as permitted by AF zoning.

CJK: Correct. This will be corrected in the final permit document.

Objection 6: Stormwater Management Plan

Appendix 21-1 contains the Stormwater Management Plan for the Leadville Mill. Pursuant to its Attachment A, titled Best Management Practices Illustrations, Storm Water Management Plan, Leadville Mill (“Attachment A”), it appears that stormwater from disturbed areas is to be captured, stored, and used in the milling process. This also seems to include captured precipitation that falls directly into the disposal pit. Appendix DR-1 of Attachment A contains the Drainage Plan, Stormwater Management (“Drainage Plan”) for the mill operation. On page 2, under the Description subheading, the Drainage Plan states: “Stormwater from disturbed mill operating areas and waste from the mill are to be stored in the TSF. Captured runoff will be used in the milling process.” Furthermore, the Drainage Plan explains on page 5, under the 4.0 Facility Drainage, General Concept subheading, that: “Surface flows from upgradient disturbed areas are directed to the Tailings Storage Facility (TSF).” This water is then slated to be “retained, reused and not released.”

CJK: The water that flows to the TSF is purchased water. Stormwater that flows into the TSF that is consumptively used will be augmented using purchased water from Parkville Water District.

The Mining Plan does not disclose this planned use of stormwater. Rather, bottled water will be provided to employees and other domestic water and process water will be obtained from Parkville Water District. (Mining Plan § 4.5.5 at 4-38.)

CJK: Correct. Potable water will be provided to employees and visitors. The process design makes every effort to recycle water and minimize the need for make-up water. However, as discussed above, not all water can be reclaimed. Water that cannot be reclaimed will be treated to destroy CN and makeup (including augmentation) water will be supplied by Parkville Water District. The process plant will not pump water from the aquifer supplying water to homes.

Colorado law requires any diversion, capturing, and placing to beneficial use of waters of the State of Colorado to be conducted in-priority unless exempted by law or unless subject to a judicially approved augmentation plan. (See Empire Lodge Homeowner’s Ass’n v. Moyer, 39 P.3d 1139 (Colo 2001) and C.R.S. § 37-92-301 et seq.) This fundamental requirement of Colorado water law applies to the capture, storage, and use of stormwater. Unless a water user

has a decreed water right to capture, store, and use stormwater, or has a judicially approved augmentation plan augmenting out-of-priority depletions caused by the capture, storage, and use of stormwater, a water user cannot legally capture, store, and use stormwater.

In this situation, there is no indication that the Applicant has a decreed water right or augmentation plan that would allow capturing, storing, and using stormwater for the milling operations. Therefore, Applicant cannot demonstrate that it has a legal right to manage and use stormwater as it proposes. The Concerned Citizens request that the Board deny the Application for lack of a stormwater management plan that is capable of implementation.

CJK: See discussion above.

Objection 7: Wildlife

In 2011, the Division of Wildlife provided a letter stating that, because the land already had been developed, the impact from fragmentation of habitat already had occurred. The letter stated that there could be “slightly” more impact to deer and elk due to additional traffic but made no recommendations relating to this issue. (Appendix 8-1.)

This report is ten years old and applied to a different operation on the Property. The Applicant proposes to double its operations and to operate 24/7. The Applicant should be required to obtain a new determination from the Division of Wildlife. Deer and elk often are observed in the area by the Concerned Citizens and likely will be impacted by noise and 24/7 activity at the facility.

CJK: 24-hour operation is currently permitted in the CUP, but truck hauling is limited to 8 hours. Also, although the production rate is double, all activity in the Application will occur on the same disturbance area as exists in the current permit. CDRMS may request a new determination by CDOW. There is also a noise limit in place that must be observed.

Objection 8: Air Emissions

The Application reports that an APEN (Air Pollution Emissions Notice) has been submitted to CDPHE. (Other Permits & Licenses at 13-1.) In addition, an APEN purportedly is attached to the Application in Appendix 13-6. However, the document attached as Appendix 13-6 is not an APEN. It is an air emissions permit issued for the Leadville Mill in 2011. That permit expired in 2016 because the facility never went into operation. Moreover, the facility at that time was permitted for half the throughput for which Applicant now seeks approval and was not authorized for cyanide leaching. Therefore, the prior permit has no relevance to the current Application. The Applicant should be required to provide a copy of the APEN it claims to have submitted to CDPHE. The APEN would provide information relevant to the impacts of the proposed operations on neighboring residential property owners and wildlife.

CJK: Correct. The 2011 APEN is expired and would not be valid due to the new process flow sheet and increased production rate. APEN-preliminary analysis suggests an APEN may not be required.

Objection 9: Noise

The only discussions of noise in the Application are statements that: (1) the trommel and the crusher will operate only 8 hours per day during the day shift (which is not defined), (Mine Plan, p. 4-6), and (2), for material delivered from off-site, truck drivers will be trained in noise mitigation. (Id. p. 4-42.) The Application contains no information about the level of noise that will be produced from these operations, or from operations during the other 16 hours a day the Mill will operate, and, other than hours of operation and training of truck drivers, no mitigation measures are proposed. Thus, it is impossible for the Board to evaluate the true impact of the proposed operation on the neighboring residential properties and on wildlife. The Applicant should be required to provide more details about operational hours and to complete a noise study of its proposed operations.

CJK: Noise limits are not regulated by CDRMS.

Objection 10: Enforcement

The Concerned Citizens also are fearful that there will be little oversight of Applicant's compliance with any permit. The Applicant was required to re-submit its initial application due to missing required components, and the accepted Application still contains the numerous inadequacies listed above. In addition, the Applicant has engaged in no material local outreach. The lack of attention to detail and absence of a concerted effort to assure neighbors of the safety of the proposed operation leaves the Concerned Citizens with little trust that the Applicant can operate the Mill safely. If a permit is issued, the facility should be regularly inspected by DRMS to assure that permit terms are fully satisfied, and that additional risk is not placed on the community.

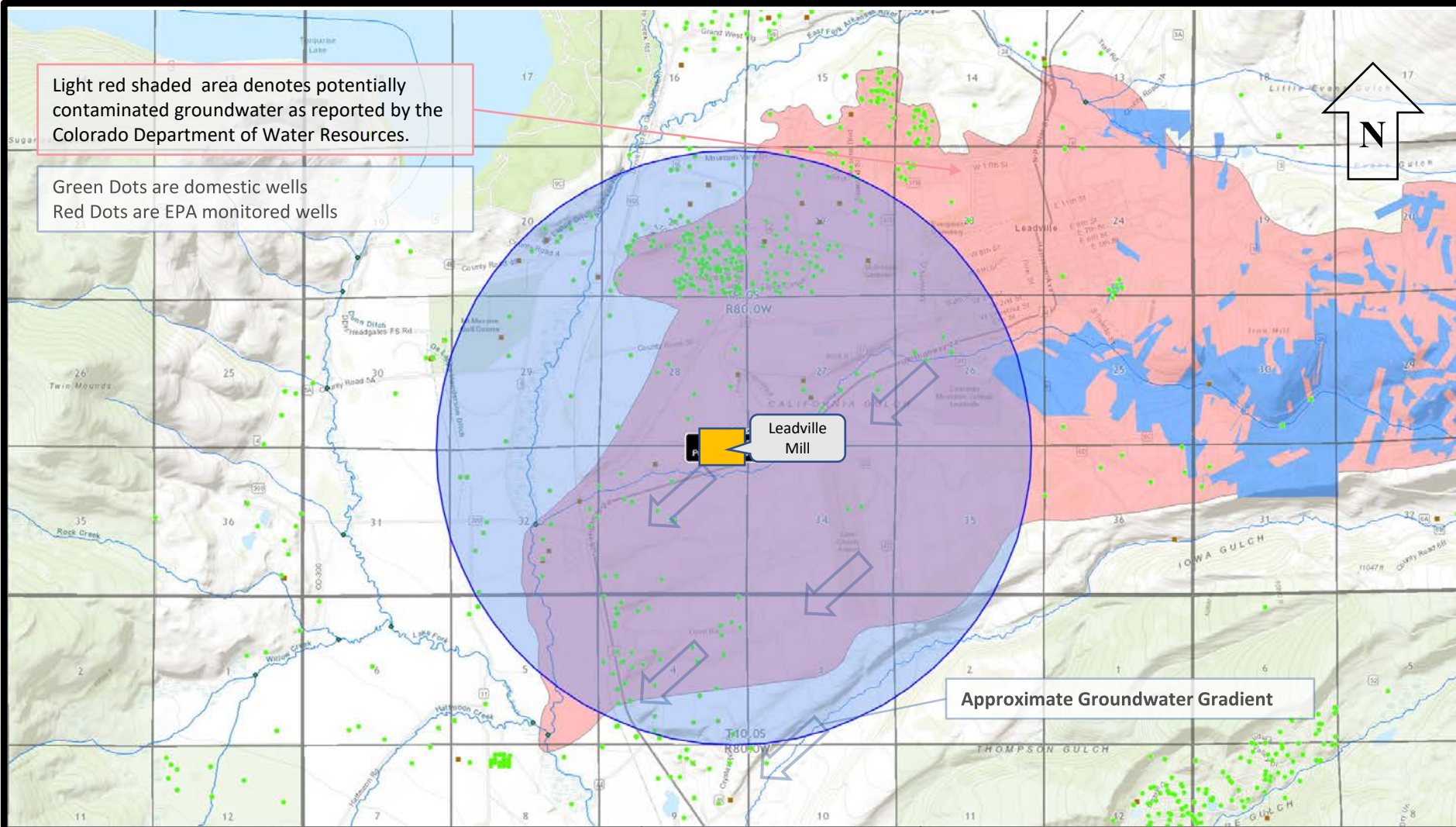
CJK: The permit process is underway with CDRMS. CJK does not believe it is prudent to prematurely engage with the community until its proposed operations are acceptable to the State. It would be confusing and counterproductive for us if, for example, we engaged with the community discussions of critical topics that would in turn need to be rescinded because of regulatory review.

CJK have, in fact, during a public meeting, invited the Concerned Citizens and the community in general to tour our facility and discuss our project. Only the Leadville Herald Democrat newspaper took us up on our offer. Nevertheless, our projects have advanced to a point where we can present accurate information to and will be reaching out to community in the near future to showcase our environmental remediation plans for Leadville and Lake County.

Sincerely,
FOR CJK MILLING COMPANY LLC

[signed]

by:
Steven Craig
Member, Union Milling Contractors

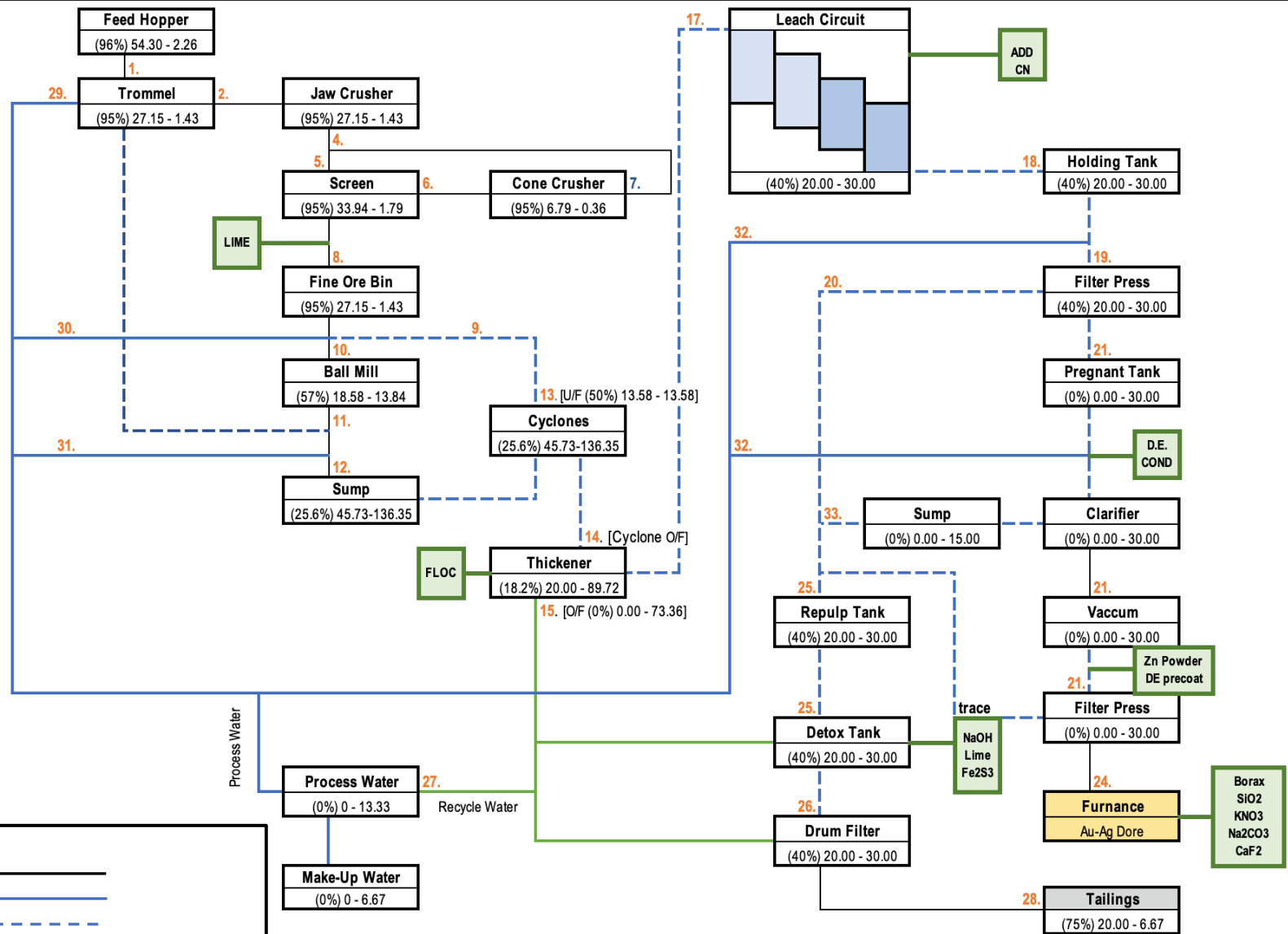


CJK Milling LLC

Source: Colorado Department of Water

Figure 1

Groundwater Wells Within 2 Miles of Leadville Mill



CJK Milling LLC

Figure 2

Leadville Mill Flowsheet and Material Balance

Legend

Solids ————

Water ————

Slurry - - - - -

Recycled Water ————

[(a%), b-c]

a = % solid, b =tph solids, c = tph water

VIA EMAIL

8 September 2021

Mr. Bill Dvorak
Dvorak Expeditions
17921 US Highway 285
Nathrop, CO 81236

RE: M1990-057 | Objection Responses

Mr. Dvorak,

Thank you for sharing your concern. CJK invites you to meet with CJK to tour the mill and mining areas, and to discuss your concerns in person.

Objection: Use of Sodium Cyanide

As a 37-year river and fishing outfitter on the Arkansas River I have grave concerns about the use of sodium cyanide upstream of where we operate and make our living. I was here for the California Gulch and Yak tunnel spills in the 80's where most of our fish and invertebrates were killed.

The Arkansas now has the greatest amount of Gold Medal fishing water in the state, about 102 miles, and is the most popular whitewater river in the country. A spill from this mine would devastate the economies of Leadville, Buena Vista, Salida, Cotopaxi, and Canon City. I urge you to deny their request for these reasons.

CJK Response:

Overview: CJK's operating plan supports environmental reclamation. Initially material to be treated is that which was mined in the late 19th and early 20th centuries and deposited on the surface as waste. This material still exists on the surface throughout the historic California District and other mining districts in Lake County and remains an active part (Operable Unit 6) of EPA's California Gulch Superfund site.

Surface run-off from these dumps contribute to acid drainage in surface waters. Placement of this material in a properly designed TSF will reduce this acid-metal laden load to the environment and is an approved remediation by EPA.

The material also contributes to the contaminated groundwater within the Leadville Area. (See **Figure 1**). This figure shows; (1) contaminated groundwater (area shaded light red), (2) water wells within 2 miles (circle) of the Mill (green are residential, gray are wells monitored by EPA), and (3) the groundwater gradient (the flow of the underground water).

CJK will be moving mine dump acid generating material located within a potentially contaminated groundwater plume to a lined facility that results in a net overall benefit to the environment and specifically to improving water quality.

Response: CJK shares your concern for the environment, and like all modern natural resource operations will take great care to protect it. This will be accomplished in 3 basic steps:

Step 1: Cyanide Handling.

CJK acknowledges the hazards related to CN, sodium bisulfate, as well as other chemicals. The handling and use of these chemicals are common in mining operations, and its safe use to the environment and human safety is highly regulated by State (Colorado Department of Reclamation Mining and Safety-CDRMS, Colorado Department of Health and the Environment-CDPHE) as well as federal (Mining Health and safety Administration-MSHA). Cyanide will be destroyed, and metals of concern will be treated using the lime used in the milling process. CJK is required by law to comply with regulations associated with the handling and use of hazardous materials and will use these industry-proven methods.

Step 2: Cyanide Destruction.

Most of the CN used in the process is reclaimed and re-used. However, the CN that cannot be reclaimed will be destroyed using ferric sulfite prior to disposal in the TSF. The cyanide detoxification process is an industry-proven method. CN concentration in the TSF will be at a safe level, on the order of 1 parts per million (ppm).

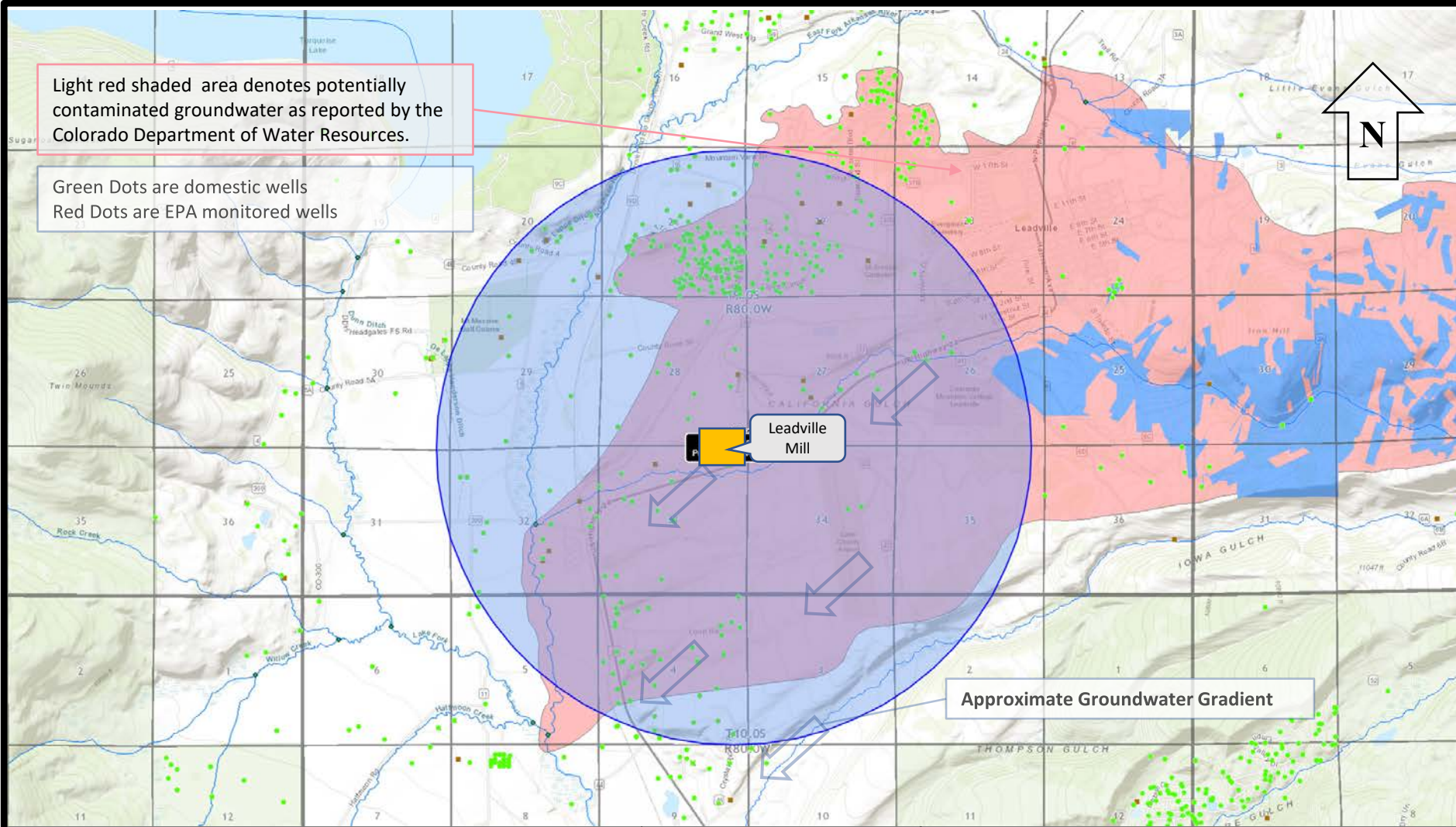
Step 3: Zero Discharge Facility.

The Leadville Mill was designed and permitted as a zero-discharge facility. No CDPHE discharge permit is required. Any discharge from the tailings dam is a CDPHE violation.

Sincerely,
FOR CJK MILLING COMPANY LLC

[signed]

by:
Steven Craig
Member, Union Milling Contractors



CJK Milling LLC

Source: Colorado Department of Water

Figure 1

Groundwater Wells Within 2 Miles of Leadville Mill

VIA EMAIL

8 September 2021

Mr. Bob Gray
Bobgray2fish@gmail.com

RE: M1990-057 | Objection Responses

Mr. Gray,

Thank you for sharing your concern. CJK invites you to meet with CJK to tour the mill and mining areas, and to discuss your concerns in person.

Objection: Use of Sodium Cyanide

I just received information that a permit to allow a “sodium cyanide gold leaching operation” near Leadville is being considered by your agency. Public comments are apparently due the same day a lot of downstream Arkansas River folks are being notified of this potential disaster. Please stop this permit from being approved or at least extend the public comment period to give the concerned public a chance to submit more comments. A clean healthy Arkansas River now flows through this valley thanks to millions of \$, the exceptional efforts of the EPA, local elected officials and citizens. Please let’s not allow another mining disaster to ruin the Arkansas River again. Thank you,

CJK Response:

Overview: CJK’s operating plan is one of environmental reclamation, not mining. CJK Mill has no intention to mine ore. Material that will be treated is that which was mined in the late 19th and early 20th centuries and deposited on the surface as waste. This material still exists on the surface throughout the historic California Gulch and other mining districts in Lake County and remains an active part (Operable Unit 6) of EPA’s California Gulch Superfund site.

Surface run-off from these dumps contribute to acid drainage in surface waters. Placement of this material in a properly designed TSF will reduce this acid-metal laden load to the environment and is an approved remediation by EPA.

The material also contributes to the contaminated groundwater within the Leadville Area. (See **Figure 1**). This figure shows; (1) contaminated groundwater (area shaded light red), (2) water wells within 2 miles (circle) of the Mill (green are residential, gray are wells monitored by EPA), and (3) the groundwater gradient (the flow of the underground water).

CJK will be moving mine dump acid generating material located within a potentially contaminated groundwater plume to a lined facility that results in a net overall benefit to the environment and specifically to improving water quality.

Response: CJK shares your concern for the environment, and like all modern natural resource operations will take great care to protect it. This will be accomplished in 3 basic steps:

Step 1: Cyanide Handling.

CJK acknowledges the hazards related to CN, sodium bisulfate, as well as other chemicals. The handling and use of these chemicals are common in mining operations, and its safe use to the environment and human safety is highly regulated by State (Colorado Department of Reclamation Mining and Safety-CDRMS, Colorado Department of Health and the Environment-CDPHE) as well as federal (Mining Health and safety Administration-MSHA). Cyanide will be destroyed, and metals of concern will be treated using the lime used in the milling process. CJK is required by law to comply with all regulations associated with the handling and use of hazardous materials and will use these industry-proven methods.

Step 2: Cyanide Destruction.

Most of the CN used in the process is reclaimed and re-used. However, the CN that cannot be reclaimed will be destroyed using ferric sulfite prior to disposal in the TSF. The cyanide detoxification process is an industry-proven method. CN concentration in the TSF will be at a safe level, on the order of 1 parts per million (ppm).

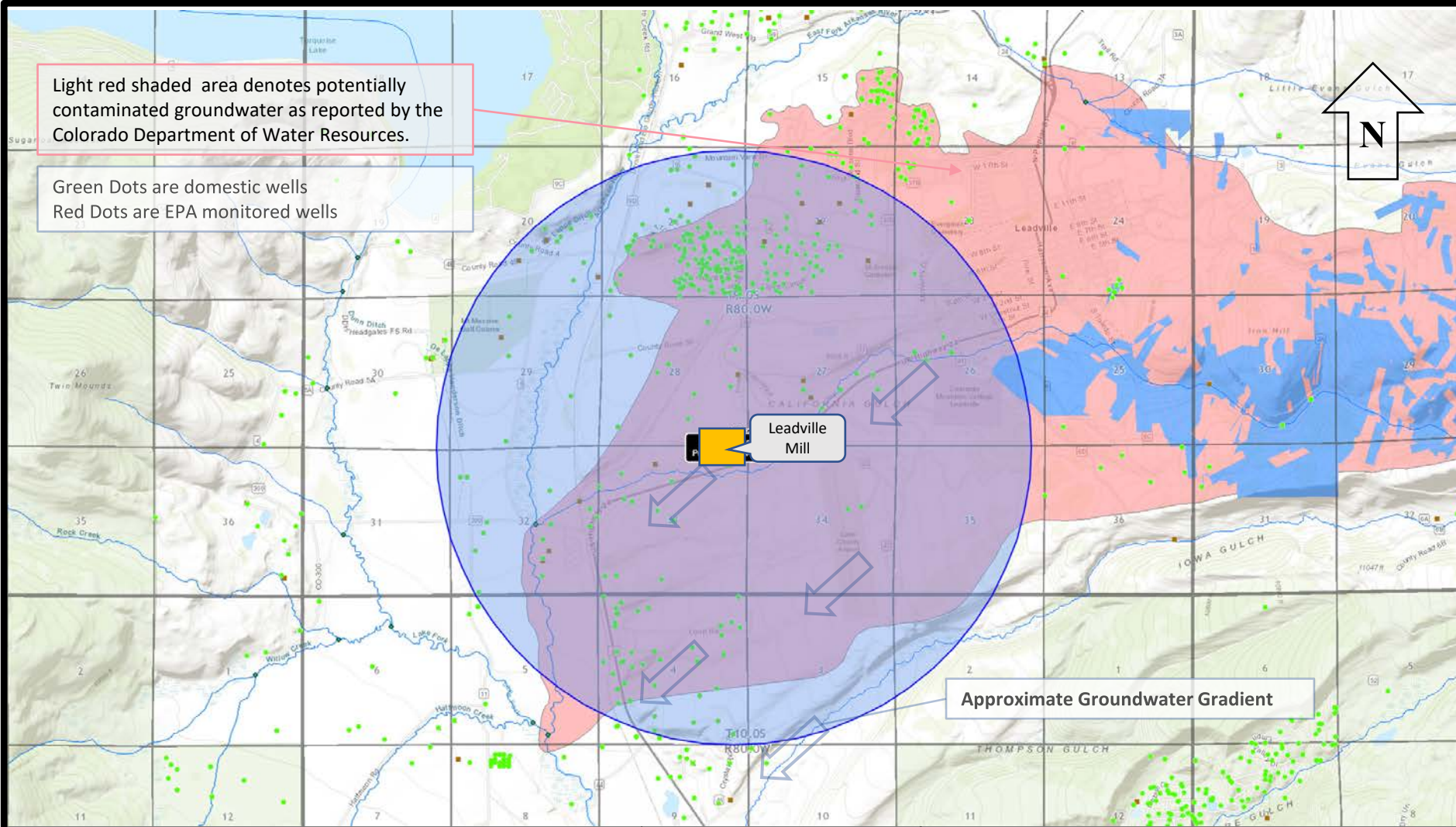
Step 3: Zero Discharge Facility.

The Leadville Mill was designed and permitted as a zero-discharge facility. No CDPHE discharge permit is required. Any discharge from the tailings dam is a CDPHE violation.

Sincerely,
FOR CJK MILLING COMPANY LLC

[signed]

by:
Steven Craig
Member, Union Milling Contractors



CJK Milling LLC

Source: Colorado Department of Water

Figure 1

Groundwater Wells Within 2 Miles of Leadville Mill

VIA EMAIL

8 September 2021

Mr. Hayden Mellsop
Salida, Colorado
hmellsop@me.com

RE: M1990-057 | Objection Responses

Mr. Mellsop,

Thank you for sharing your concern. CJK invites you to meet with CJK to tour the mill and mining areas, and to discuss your concerns in person.

Objection: Use of Sodium Cyanide

I have grave concerns about the use of sodium cyanide in the headwaters of the Arkansas River. The California Gulch and Yak tunnel spills in the 80's decimated the fish and invertebrate populations of the river, which took decades to recover.

*The Arkansas now has the greatest amount of **Gold Medal fishing water in the state**, about 102 miles, and is the most popular whitewater river in the country. A spill from this mine would devastate the economies of Leadville, Buena Vista, Salida, Cotopaxi, and Canon City. I urge you to deny their request for these reasons.*

CJK Response:

Overview: CJK's operating plan supports environmental reclamation. Initially material to be treated is that which was mined in the late 19th and early 20th centuries and deposited on the surface as waste. This material still exists on the surface throughout the historic California District and other mining districts in Lake County and remains an active part (Operable Unit 6) of EPA's California Gulch Superfund site.

Surface run-off from these dumps contribute to acid drainage in surface waters. Placement of this material in a properly designed TSF will reduce this acid-metal laden load to the environment and is an approved remediation by EPA.

The material also contributes to the contaminated groundwater within the Leadville Area. (See **Figure 1**). This figure shows; (1) contaminated groundwater (area shaded light red), (2) water wells within 2 miles (circle) of the Mill (green are residential, gray are wells monitored by EPA), and (3) the groundwater gradient (the flow of the underground water).

CJK will be moving mine dump acid generating material located within a potentially contaminated groundwater plume to a lined facility that results in a net overall benefit to the environment and specifically to improving water quality.

Response: CJK shares your concern for the environment, and like all modern natural resource operations will take great care to protect it. This will be accomplished in 3 basic steps:

Step 1: Cyanide Handling.

CJK acknowledges the hazards related to CN, sodium bisulfate, as well as other chemicals. The handling and use of these chemicals are common in mining operations, and its safe use to the environment and human safety is highly regulated by State (Colorado Department of Reclamation Mining and Safety-CDRMS, Colorado Department of Health and the Environment-CDPHE) as well as federal (Mining Health and safety Administration-MSHA). Cyanide will be destroyed, and metals of concern will be treated using the lime used in the milling process. CJK is required by law to comply with all regulations associated with the handling and use of hazardous materials and will use these industry-proven methods.

Step 2: Cyanide Destruction.

Most of the CN used in the process is reclaimed and re-used. However, the CN that cannot be reclaimed will be destroyed using ferric sulfite prior to disposal in the TSF. The cyanide detoxification process is an industry-proven method. CN concentration in the TSF will be at a safe level, on the order of 1 parts per million (ppm).

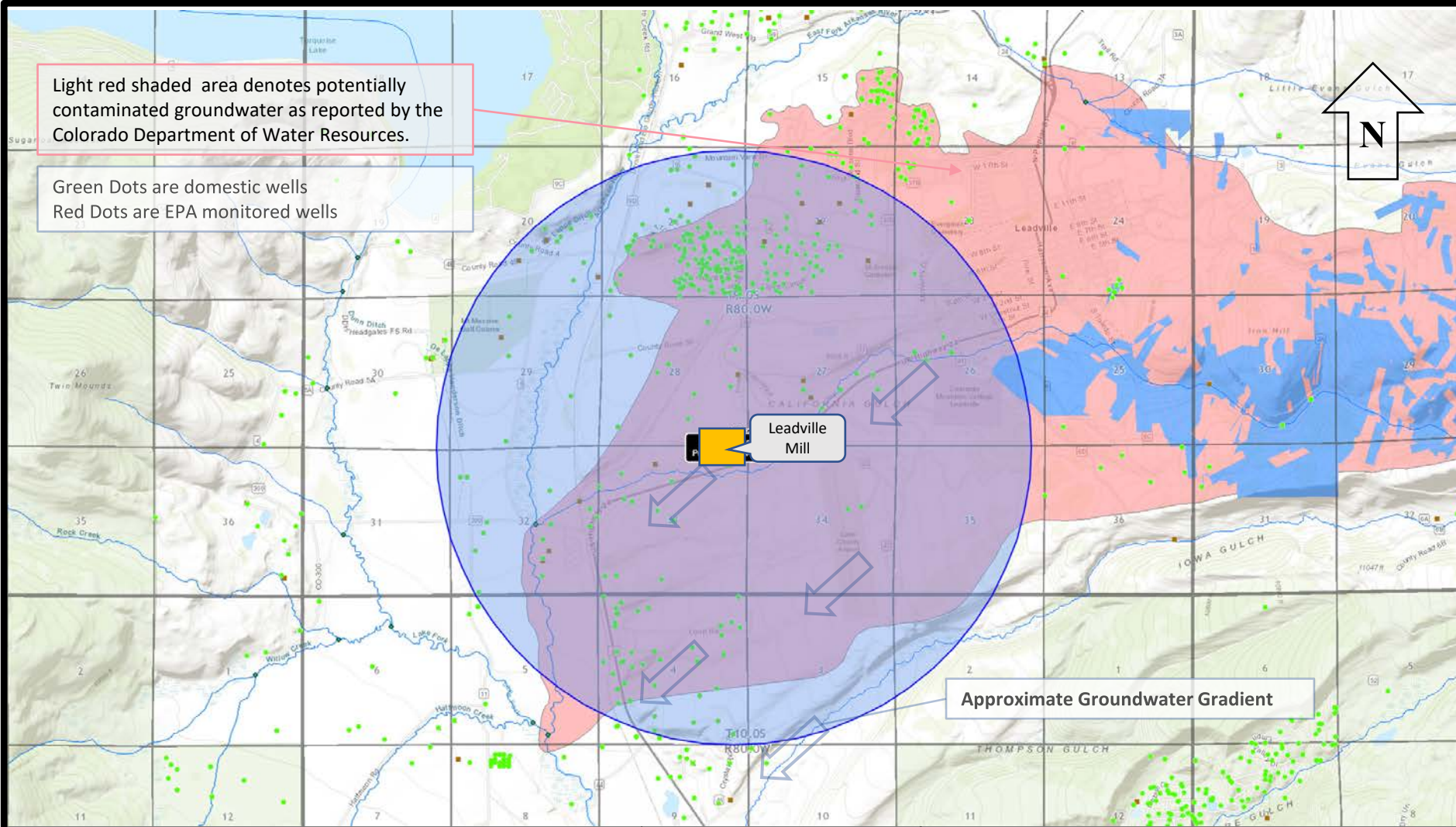
Step 3: Zero Discharge Facility.

The Leadville Mill was designed and permitted as a zero-discharge facility. No CDPHE discharge permit is required. Any discharge from the tailings dam is a CDPHE violation.

Sincerely,
FOR CJK MILLING COMPANY LLC

[signed]

by:
Steven Craig
Member, Union Milling Contractors



CJK Milling LLC

Source: Colorado Department of Water

Figure 1

Groundwater Wells Within 2 Miles of Leadville Mill

VIA EMAIL

8 September 2021

Mr. Jerry Wright
12587 CR 261K
Nathrop, CO 81236
jwantero@me.com

RE: M1990-057 | Objection Responses

Mr. Wright,

Thank you for sharing your concern. CJK invites you to meet with CJK to tour the mill and mining areas, and to discuss your concerns in person.

Objections: Use of Sodium Cyanide, Expand Permit Area, Expand Tailings Area, Increase Capacity

The application included the use of vat leaching, incorporating sodium cyanide, an extremely toxic material. In addition to the vat leaching, the applicant wish to expand the permit area, expand the tailings facility and increase operating capacity from 200tons/day to 400tons/day. This process, as stated by the applicant, would require 1600lbs of sodium cyanide per day of 24 tons of sodium cyanide per month even with recycling the sodium cyanide in the system. The applicant mentions neutralizing the cyanide as part of the process but it is unclear in the application which chemicals stored on site would be used for neutralization and whether an sufficient amount would be on site in case of an emergency. The output of vat leaching is ounces of gold and tons of cyanide contaminated tailings stored in lined open tailings ponds.

Overview: CJK's operating plan supports environmental reclamation. Initially material to be treated is that which was mined in the late 19th and early 20th centuries and deposited on the surface as waste. This material still exists on the surface throughout the historic California District and other mining districts in Lake County, and remains an active part (Operable Unit 6) of EPA's California Gulch Superfund site.

Surface run-off from these dumps contribute to acid drainage in surface waters. Placement of this material in a properly designed TSF will reduce this acid-metal laden load to the environment and is an approved remediation by EPA.

The material also contributes to the contaminated groundwater within the Leadville Area. (See **Figure 1**). This figure shows; (1) contaminated groundwater (area shaded light red), (2) water wells within 2 miles (circle) of the Mill (green are residential, gray are wells monitored by EPA), and (3) the groundwater gradient (the flow of the underground water).

CJK will be moving mine dump acid generating material located within a potentially contaminated groundwater plume to a lined facility that results in a net overall benefit to the environment and specifically to improving water quality.

Response: CJK shares your concern for the environment, and like all modern natural resource operations will take great care to protect it. This will be accomplished in 3 basic steps:

Step 1: Cyanide Handling.

CJK acknowledges the hazards related to CN, sodium bisulfate, as well as other chemicals. The handling and use of these chemicals are common in mining operations, and its safe use to the environment and human safety is highly regulated by State (Colorado Department of Reclamation Mining and Safety-CDRMS, Colorado Department of Health and the Environment-CDPHE) as well as federal (Mining Health and safety Administration-MSHA). Cyanide will be destroyed, and metals of concern will be treated using the lime used in the milling process. CJK is required by law to comply with all regulations associated with the handling and use of hazardous materials and will use these industry-proven methods.

Step 2: Cyanide Destruction.

Most of the CN used in the process is reclaimed and re-used. However, the CN that cannot be reclaimed will be destroyed using ferric sulfite prior to disposal in the TSF. The cyanide detoxification process is an industry-proven method. CN concentration in the TSF will be at a safe level, on the order of 1 parts per million (ppm).

Step 3: Zero Discharge Facility.

The Leadville Mill was designed and permitted as a zero-discharge facility. No CDPHE discharge permit is required. Any discharge from the tailings dam is a CDPHE violation.

Cyanide Consumption.

The chemical symbol for cyanide is CN, as it contains one atom of carbon and one atom of nitrogen, 2 of the most common and benign elements on earth. It is important to note that once cyanide is consumed in the process it is no longer toxic. However, as discussed above most but not all CN is consumed. The remaining cyanide is what is destroyed before it is sent to the tailings facility and a very low (and safe) concentration.

Expand Permit Area and Tailings Facility.

The permit area is being expanded to equal the size of the current land owned by CJK. The current application does not however contemplate expanding the current tailings facility.

Risk of Spill.

Spill prevention consists of; sumps & pumps, containment in tank areas, and the tailings facility. Sumps (and associated pumps) are secondary containment but can be thought of as surge tanks that catch process water allowing pumps to recirculate solution back into the process or to the TSF. They cannot accommodate containment in the event of a plant upset. However, they are located within the spill containment areas and would also serve as pumps to contain high volume spills within the facility should that occur, including pumping into the TSF. The mill building foundation and the leach tank area foundation will be sealed and will serve as tertiary containment in the event of spills. The TSF serves as the ultimate containment, and as such will always contain enough volume to accommodate 150% of all solution in the process system. This is a permit requirement.

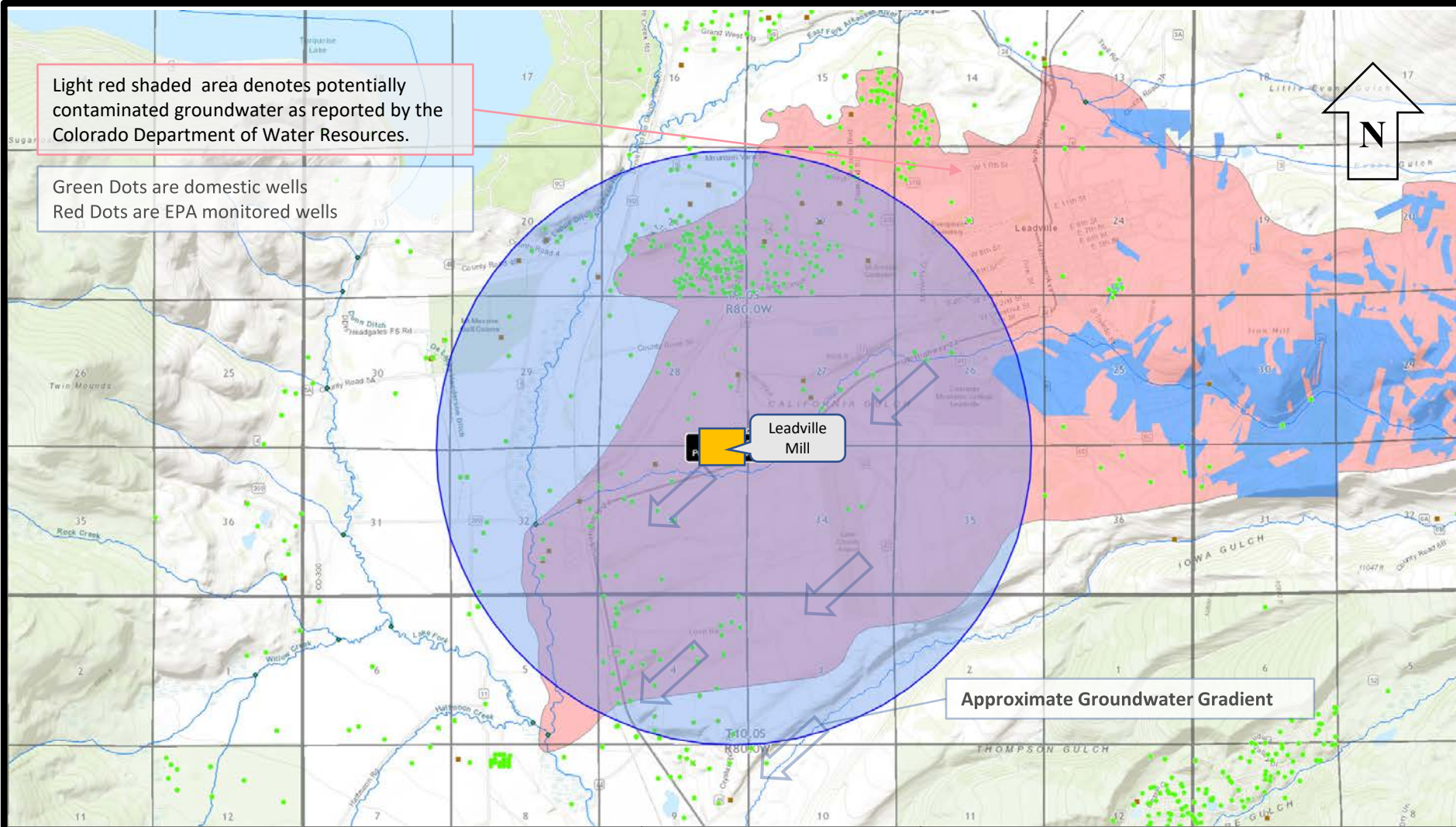
Typically, when a leak is detected, the plant will shut down, other tanks will be cut off, and the leaking tank will be drained and repaired. The sumps are designed to contain spills that may be encountered during this type of circumstance.

Note that the Mill was purposely built on the side of a hill to take advantage of gravity. In general, material enters the mill at the top and flows to the bottom of the facility. In the highly unlikely event of a catastrophic failure – where every tank containing solution fails simultaneously - solution will flow to the sumps (within the containment areas), then into the TSF. Given the TSF is downstream from the Mill sump pumps will have gravity as a backup.

Sincerely,
FOR CJK MILLING COMPANY LLC

[signed]

by:
Steven Craig
Member, Union Milling Contractors



CJK Milling LLC

Source: Colorado Department of Water

Figure 1

Groundwater Wells Within 2 Miles of Leadville Mill

VIA EMAIL

8 September 2021

Mr. Reed Dils
29940 CR 353E
Buena Vista, CO 81211
Karendils4@gmail.com

RE: M1990-057 | Objection Responses

Mr. Dils,

Thank you for sharing your concern. CJK invites Trout Unlimited to meet with CJK to tour the mill and mining areas, and to discuss possible synergies with you.

Objection 1: Tailings Facility Liner

"....Union must use the proposed geosynthetic clay liner (GCL) only as a secondary liner and not a primary liner. Given the proximity to other water sources and the downstream Arkansas River, a GCL should be overlain by an impermeable plastic HDPE or chemically resistant liner. GCLs can crack under the right conditions and over time, and this is not a chance we want to take in this watershed. There have been over devastating leaks of sodium cyanide into rivers. The Arkansas is a Gold Medal River and we don't want that to happen. Too much economic and recreational activity depend on it. I was here during the bad days where few fish lived due to pollution from Leadville mines.

CJK: CJK agrees with this assessment and in fact the Tailings Storage Facility (TSF) is designed as a zero-discharge facility with a 45-mil polypropylene liner as primary liner, followed by a leak detection system and a GCL as the secondary liner. Also, the leak detection will report to a sump where leaks, if they occur can be pumped and recirculated back into the TSF.

Objection 2: Use of Sodium Cyanide

"However, without more information and time, I would be opposed to this use of sodium cyanide at this point, especially if the extra precautions are not taken. "

CJK: CJK shares your concern for the environment, and like all modern natural resource operations takes great care to protect it. This will be accomplished in 3 basic steps:

Step 1: Cyanide Handling.

CJK acknowledges the hazards related to CN, sodium bisulfate, as well as other chemicals. The handling and use of these chemicals are common in mining operations, and its safe use to the environment and human safety is highly regulated by State (Colorado Department of Reclamation Mining and Safety-CDRMS, Colorado Department of Health and the Environment-CDPHE) as well as federal (Mining Health and safety Administration-MSHA). Cyanide will be

destroyed, and metals of concern will be treated using the lime used in the milling process. CJK is required by law to comply with all regulations associated with the handling and use of hazardous materials and will use these industry-proven methods.

Step 2: Cyanide Destruction.

Most of the CN used in the process is reclaimed and re-used. However, the CN that cannot be reclaimed will be destroyed using ferric sulfite prior to disposal in the TSF. The cyanide detoxification process is an industry-proven method. CN concentration in the TSF will be at a safe level, on the order of 1 parts per million (ppm).

Step 3: Zero Discharge Facility.

The Leadville Mill was designed and permitted as a zero-discharge facility. No CDPHE discharge permit is required. Any discharge from the tailings dam is a CDPHE violation.

Opportunity: Improve Waterways

The Union Mill, if done properly has the potential to receive tailings and waste from other areas of the State to re-process them. This would improve the waterways where tailings are being pulled from, while also yielding a more-benign tailings product with the metals stripped out of it....".

CJK: CJK are in agreement with your statement, and this is essentially our business model - one of environmental reclamation, not mining.

Overview: CJK's operating plan supports environmental reclamation. Initially material to be treated is that which was mined in the late 19th and early 20th centuries and deposited on the surface as waste. This material still exists on the surface throughout the historic California Gulch and other mining districts in Lake County and remains an active part (Operable Unit 6) of EPA's California Gulch Superfund site.

Surface run-off from these dumps contribute to acid drainage in surface waters. Placement of this material in a properly designed TSF will reduce this acid-metal laden load to the environment and is an approved remediation by EPA.

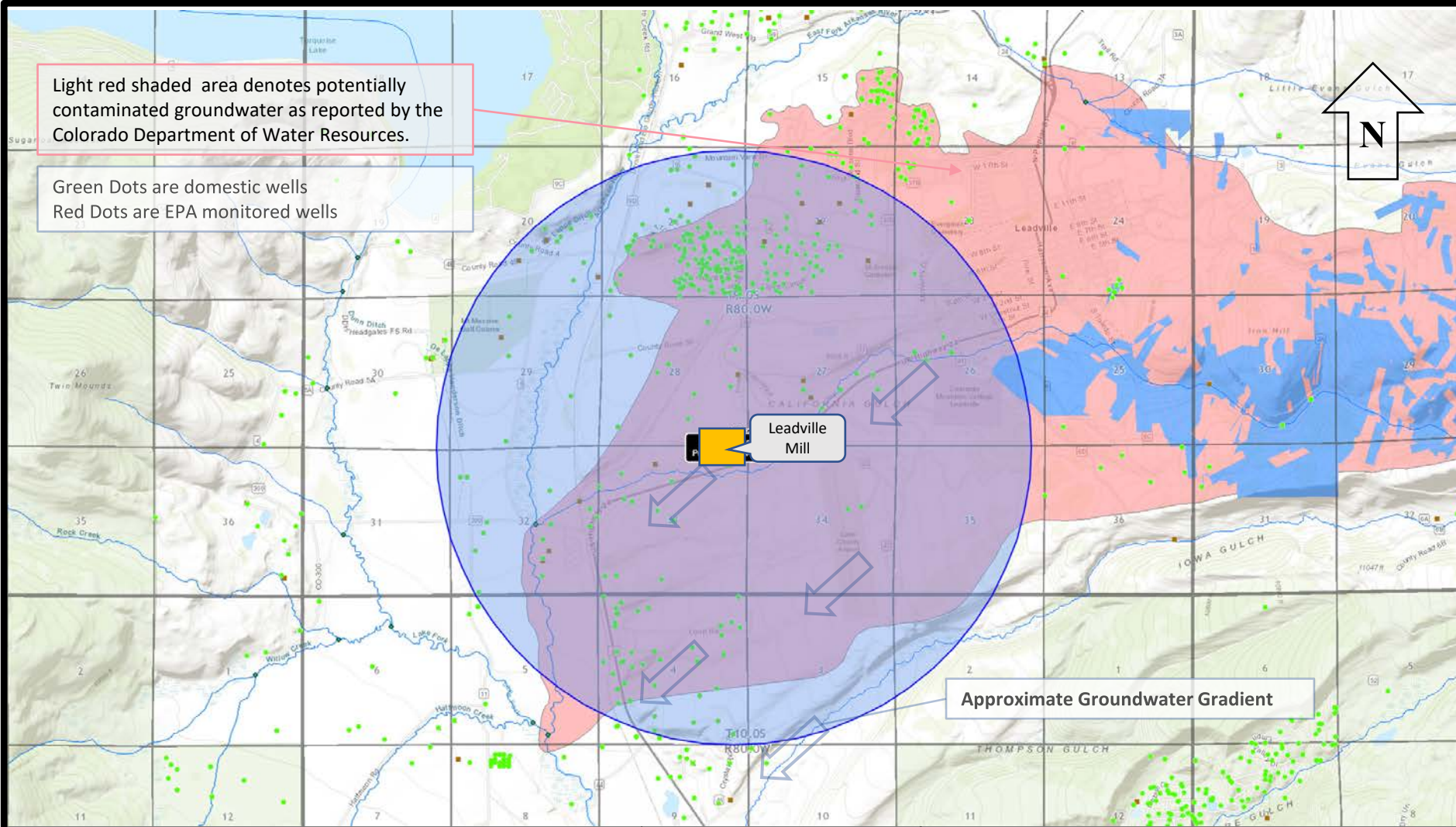
The material also contributes to the contaminated groundwater within the Leadville Area. (See **Figure 1**). This figure shows; (1) contaminated groundwater (area shaded light red), (2) water wells within 2 miles (circle) of the Mill (green are residential, gray are wells monitored by EPA), and (3) the groundwater gradient (the flow of the underground water).

CJK will be moving mine dump acid generating material located within a potentially contaminated groundwater plume to a lined facility that results in a net overall benefit to the environment and specifically to improving water quality.

Sincerely,
FOR CJK MILLING COMPANY LLC

[signed]

by:
Steven Craig
Member, Union Milling Contractors



CJK Milling LLC

Source: Colorado Department of Water

Figure 1

Groundwater Wells Within 2 Miles of Leadville Mill

VIA EMAIL

8 September 2021

Mr. Rick Hemlick
12810 County Rd. 195
Salida, CO 81201
helmick@gobrainstorm.net

RE: M1990-057 | Objection Responses

Mr. Hemlick,

Thank you for sharing your concern. CJK invites you to meet with CJK to tour the mill and reclamation areas, and to discuss your concerns in person.

Objection 1: Tailings Facility Liner

We suggest that the applicant plans to use the proposed geosynthetic clay liner (GCL) as a secondary liner and not a primary liner. Given the proximity to other water sources and the downstream Arkansas River, a GCL should be overlain by an impermeable plastic HDPE or chemically resistant liner. GCLs can crack under the right conditions and over time, and this is not a chance we want to take in the watershed.

CJK Response:

Overview: CJK's operating plan supports environmental reclamation. Initially material to be treated is that which was mined in the late 19th and early 20th centuries and deposited on the surface as waste. This material still exists on the surface throughout the historic California District and other mining districts in Lake County and remains an active part (Operable Unit 6) of EPA's California Gulch Superfund site.

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CJK will be moving mine dump acid generating material located within a potentially contaminated groundwater plume to a lined facility that results in a net overall benefit to the environment and specifically to improving water quality.

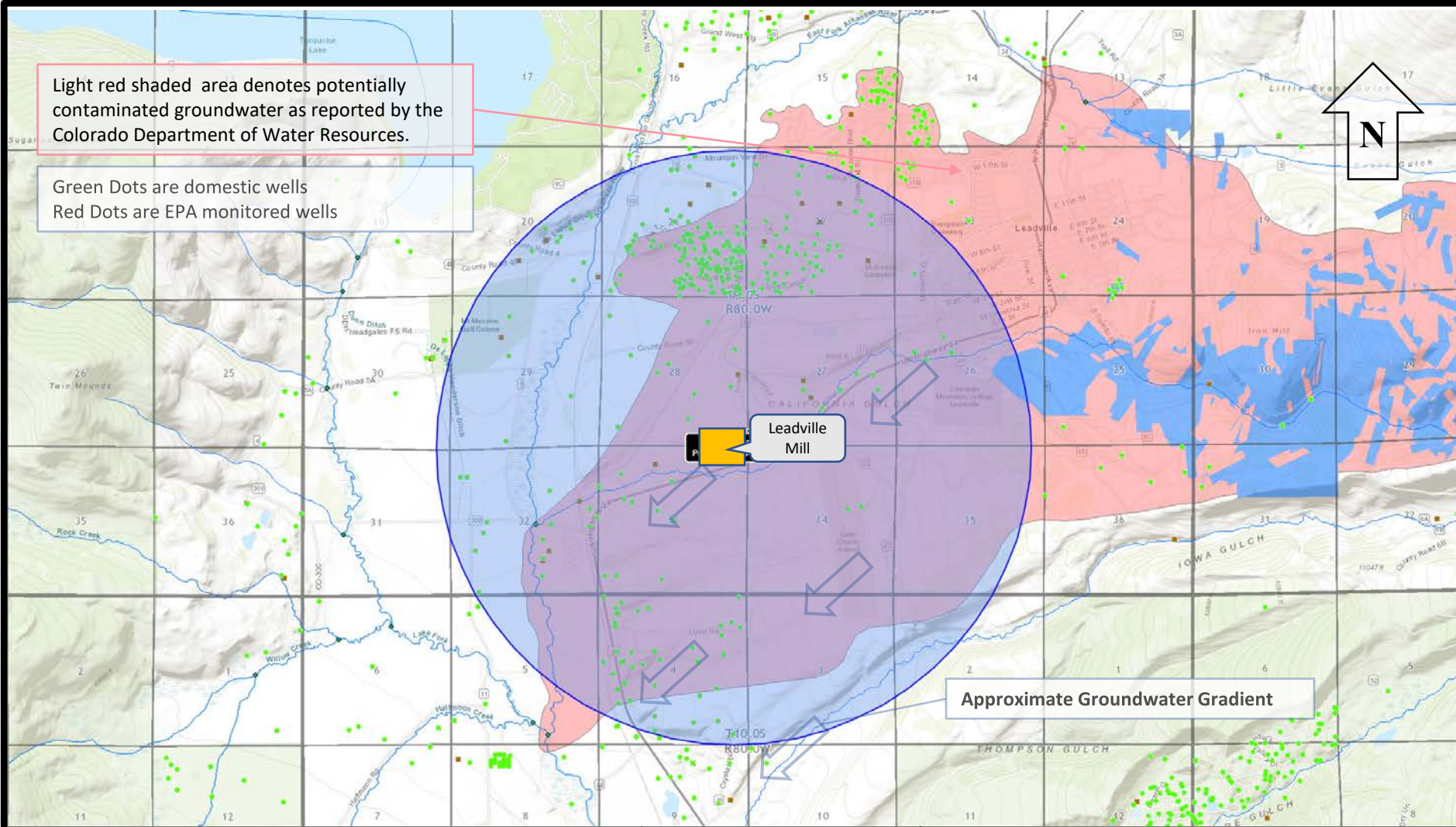
Response:

CJK agrees with this assessment and in fact the Tailings Storage Facility (TSF) is designed as a zero-discharge facility with a 45-mil polypropylene liner as primary liner, followed by a leak detection system and a GCL as the secondary liner.

Sincerely,
FOR CJK MILLING COMPANY LLC

[signed]

by:
Steven Craig
Member, Union Milling Contractors



CJK Milling LLC

Source: Colorado Department of Water

Figure 1

Groundwater Wells Within 2 Miles of Leadville Mill

VIA EMAIL

8 September 2021

Mr. Michael Irwin &
Lake County Government
POB 952
Leadville, CO 80461
mirwin@co.lake.us

RE: M1990-057 | Objection Responses

Mr. Irwin and Lake County Commissioners,

Thank you for sharing your concern. CJK invites you to meet with CJK to tour the mill and reclamation areas, and to discuss your concerns in person.

CJK's operating plan is one of environmental reclamation, not mining. CJK has no intention to mine ore. Material that will be treated is that which was mined in the late 19th and early 20th centuries and deposited on the surface as waste. This material still exists on the surface throughout the historic California District and other mining districts in Lake County and remains an active part (Operable Unit 6) of EPA's California Gulch Superfund site.

Surface run-off from these dumps contribute to acid drainage in surface waters. Placement of this material in a properly designed TSF will reduce this acid load to the environment and is an approved remediation by EPA.

The material also contributes to the potentially contaminated groundwater under most of Leadville, as reported by the State of Colorado. See **Figure 1**. This figure shows; (1) potentially contaminated groundwater (area shaded light red), (2) water wells within 2 miles (circle) of the Mill (green are residential, gray are wells monitored by EPA), and (3) the groundwater gradient (the flow of the underground water).

CJK opine that moving acid generating material within the potentially contaminated groundwater plume to a lined facility that is still within this plume will result in a net benefit to the environment.

Objection 1: Doubling Production

Ancillary impacts on roads, Arkansas River and Headwaters watershed contamination, adjusting surety held to be adequate to current days costs of mitigation, adjacent residential compatibility.

CJK:

Impact on Roads

Material hauling associated with CJK's Penn Mine Project, and will be addressed in future mine dump permits, and when third-party toll ore agreements are considered.

Arkansas River and Headwaters watershed contamination

Protection of Arkansas River Watershed and Headwaters will be accomplished in 3 basic steps:

Step 1: Cyanide Handling.

CJK acknowledges the hazards related to CN, sodium bisulfate, as well as other chemicals. The handling and use of these chemicals are common in mining operations, and its safe use to the environment and human safety is highly regulated by State (Colorado Department of Reclamation Mining and Safety-CDRMS, Colorado Department of Health and the Environment-CDPHE) as well as federal (Mining Health and safety Administration-MSHA). Cyanide will be destroyed, and metals of concern will be treated using the lime used in the milling process. CJK is required by law to comply with all regulations associated with the handling and use of hazardous materials and will do these using industry-proven methods.

Step 2: Cyanide Destruction.

Most of the CN used in the process is reclaimed and re-used. However, the CN that cannot be reclaimed will be destroyed using ferric sulfite prior to disposal in the TSF. The cyanide detoxification process is an industry-proven method. CN concentration in the TSF will be at a safe level, on the order of 1 parts per million (ppm).

Step 3: Zero Discharge Facility.

The Leadville Mill was designed and permitted as a zero-discharge facility. No CDPHE discharge permit is required. Any discharge from the tailings dam is a CDPHE violation.

Surety

The Reclamation bond for the permit application will increase materially for the proposed operation. This is currently under review by CDRMS. The bond value must, however, be in place prior to permit approval.

Zoning Compatibility

The Mill property is located on land zoned Industrial/Mining, which allows for the operation of the Mill, and a Conditional Use Permit (CUP) was granted by Lake County in 2011. This CUP will be amended (or replaced with a new CUP) for the proposed operation. The CUP application will be submitted upon Permit approval by the State (CDRMS).

Objection 2: Cyanide Use

Containment for Arkansas River (Gold Metal Waters). Residential neighboring uses including Lakefork Mobile Home Park (Junction Hwy 300 and HWY 24) and other downstream/wells, Sanitation District Operations just downstream/adjacent (Sanitation is already facing the ringer with CDPHE to comply with effluent regulations that are developing. We hate for this to impact their investments, let alone impact to the only sanitary water system serving Leadville and Lake County).

CJK:

1. Containment & Wells. See comment 2 under Objection 1 above.
2. Water Impact on Wells. The mill will purchase water from Parkville Water District. Will not use well water.
3. Sanitation District. See Figure 1. The Mill is both down-elevation and down gradient from Leadville Sanitation. Mill operations cannot impact this facility. Also, the facility is zero discharge, so there is no downstream effluent issue.

Objection 3: Emergency Spillway

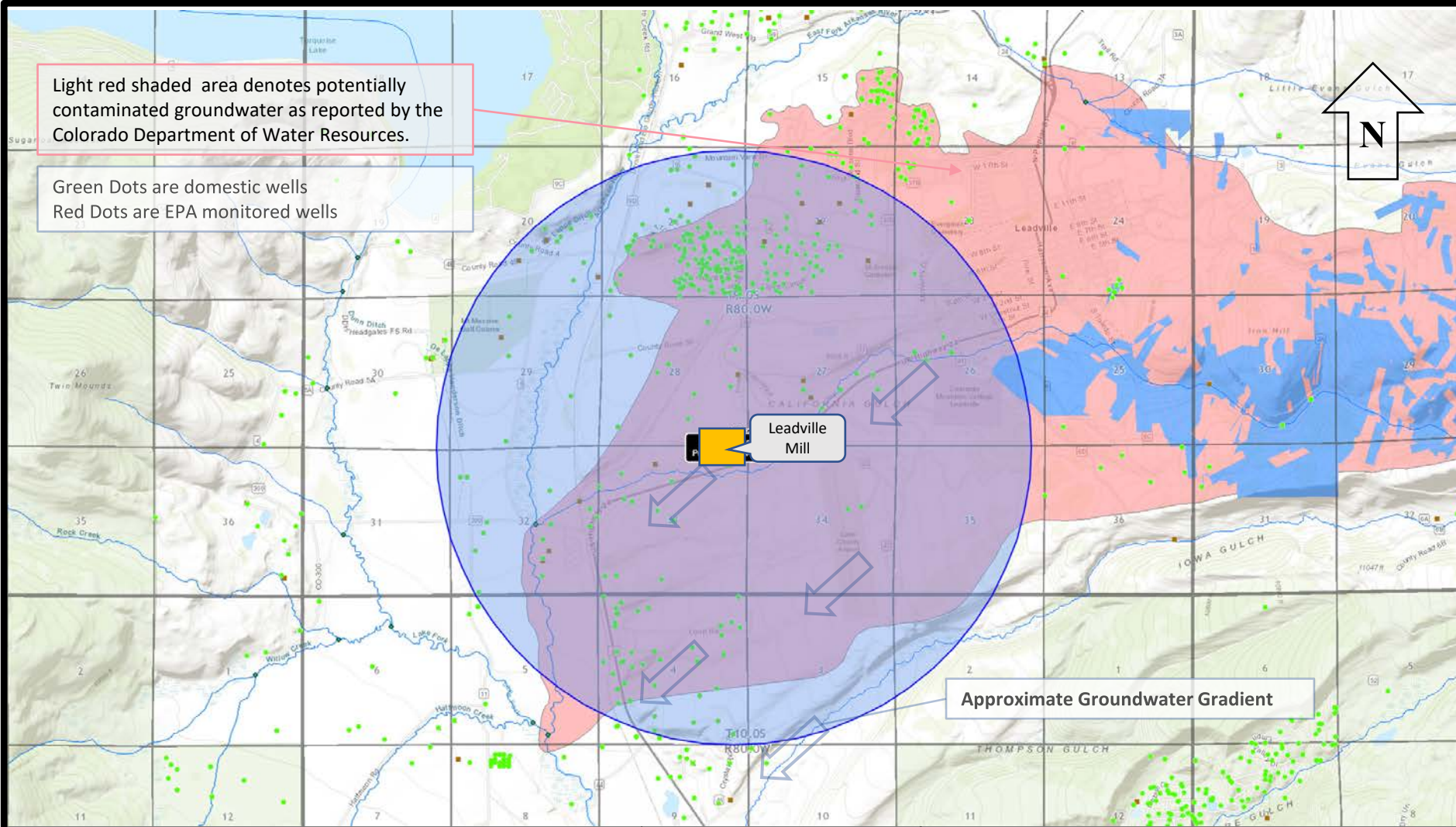
Where does Emergency Spillway flow to? Is there any secondary containment or collection facility?

CJK: The tailings dam is the ultimate containment for the facility. This is consistent with the zero-discharge design. In the event of spills, the Mill Building and proposed leach tank area have been designed (and built in the case of the mill building) as secondary containment. In the event these containments cannot accommodate the spill, the tailings dam becomes the ultimate containment. Note that the permit requires the Tailings Dam to accommodate 150% of all solutions in the process. The emergency spillway shown in the tailings drawings is to protect the facility from dam breach failure. Discharge from the tailings dam is a CDPHE violation.

Sincerely,
FOR CJK MILLING COMPANY LLC

[signed]

by:
Steven Craig
Member, Union Milling Contractors



CJK Milling LLC

Source: Colorado Department of Water

Figure 1

Groundwater Wells Within 2 Miles of Leadville Mill

VIA EMAIL

8 September 2021

Mr. Stephen Bain
Wellborn Sullivan Meck & Tooley, P.C. and
Leadville Sanitation District Board
1401 Lawrence St., Suite 1800
Denver, CO 80202
303-830-2500

RE: M1990-057 | Objection Responses

Mr. Bain & Leadville Sanitation Board,

Thank you for sharing your concerns and your well-thought-out questions. CJK invites you to meet with CJK to tour the mill and reclamation areas, and to discuss your concerns in person.

CJK's operating plan supports environmental reclamation. Initially material to be treated is that which was mined in the late 19th and early 20th centuries and deposited on the surface as waste. This material still exists on the surface throughout the historic California District and other mining districts in Lake County and remains an active part (Operable Unit 6) of EPA's California Gulch Superfund site.

Surface run-off from these dumps contribute to acid drainage in surface waters. Placement of this this material in a properly designed TSF will reduce this acid-metal laden load to the environment and is an approved remediation by EPA.

The material also contributes to the contaminated groundwater within the Leadville Area. (See **Figure 1**). This figure shows; (1) contaminated groundwater (area shaded light red), (2) water wells within 2 miles (circle) of the Mill (green are residential, gray are wells monitored by EPA), and (3) groundwater gradient (the flow of the underground water).

CJK will be moving mine dump acid generating material located within a potentially contaminated groundwater plume to a lined facility that results in a net overall benefit to the environment and specifically to improving water quality.

CJK shares your concern for the environment, and like all modern natural resource operations will take great care to protect it. This will be accomplished in 3 basic steps:

Step 1: Cyanide Handling.

CJK acknowledges the hazards related to CN, sodium bisulfate, as well as other chemicals. The handling and use of these chemicals are common in mining operations, and its safe use to the environment and human safety is highly regulated by State (Colorado Department of Reclamation Mining and Safety-CDRMS, Colorado Department of Health and the Environment-CDPHE) as well as federal (Mining Health and safety Administration-MSHA). Cyanide will be

destroyed, and metals of concern will be treated using the lime used in the milling process. CJK is required by law to comply with all regulations associated with the handling and use of hazardous materials and will do these using industry-proven methods.

Step 2: Cyanide Destruction.

Most of the CN used in the process is reclaimed and re-used. However, the CN that cannot be reclaimed will be destroyed using ferric sulfite prior to disposal in the TSF. The cyanide detoxification process is an industry-proven method. CN concentration in the TSF will be at a safe level, on the order of 1 parts per million (ppm).

Step 3: Zero Discharge Facility.

The Leadville Mill was designed and permitted as a zero-discharge facility. No CDPHE discharge permit is required. Any discharge from the tailings dam is a CDPHE violation.

Objection 1: Water Quality

The District's Colorado Discharge Permit System ("CDPS") permit from the Colorado Department of Public Health and Environment ("CDPHE") requires the District to sample and analyze effluent for the following pollutants: arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver, zinc, cyanide, and phenols. The District spends significant amounts of time and money trying to comply with its discharge permit and cannot afford to have its operations jeopardized by any nearby activities that might impact its ability to meet CDPHE's strict permit limits.

The District is also operating under Cease and Desist Order No. DO-181109-1 dated November 9, 2018, issued by CDPHE and requiring the District to comply with permit effluent limitations, specifically for the 30-day average mercury limit of 0.077 ug/L. Low level mercury is present throughout Leadville in the soil, water, and air due to historic mining operations. The District is concerned that the Applicant's proposed increased operations will only make it more difficult to meet the CDPS permit limits and comply with CDPHE's Cease and Desist Order. See JVA Memo.

In addition, as noted in the JVA Memo, the Applicant proposes in Table 5-2 to report contaminants in mg/L. The District's permit limits are stated in ug/L. The Applicant's testing may miss reporting some contaminants that are not detected because the reporting limits are not as refined. The Applicant should also test and report in ug/L.

CJK: Previous mill owners and CJK, the current owner has also been performing water testing since 2011 when the mill was granted by CDRMS y, CDPHE and Lake County permits The Mill property, while next to the Sanitation polishing pond and facility, is both down-elevation and down groundwater gradient. CJK's potential impact to surface- and groundwater quality is also subject to State regulatory requirements.

CJK's water quality data is provided in ug/l, and agree, given CDRMS approval, to amend the permit document to report these data accordingly. CJK is open to sharing water quality data with Leadville Sanitation if you are open to the idea.

Objection 2: Cyanide

Although processing gold ore with cyanide may be standard in the industry, it is not without risk. The Material Safety Data Sheet ("MSDS") for sodium cyanide shows it to be identified with the following hazards: corrosive to metals, acute oral toxicity, acute dermal toxicity, acute inhalation toxicity, and specific target organ toxicity (single exposure). It is fatal if swallowed, in contact with skin, or inhaled. It is also "[v]ery toxic to aquatic life with long lasting effects." Application, Appendix 21-2. There have been a number of serious incidents around the world involving cyanide spills and leaks. The amount of sodium cyanide the Applicant proposes to use, 1,600 pounds per day, is not insignificant. Application, Exhibit D, Table 4-6. The mere fact of the next door neighbor using so much cyanide gives the District concern.

In addition, the District is concerned that the Applicant has not demonstrated that it has significant experience working and processing ore with cyanide. Showing a high level of expertise should be required before approving the permit conversion.

CJK: CJK shares your concern for the environment, and like all modern natural resource operations will take great care to protect it. This will be accomplished in 3 basic steps:

Step 1: Cyanide Handling.

CJK acknowledges the hazards related to CN, sodium bisulfate, as well as other chemicals. The handling and use of these chemicals are common in mining operations, and its safe use to the environment and human safety is highly regulated by State (Colorado Department of Reclamation Mining and Safety-CDRMS, Colorado Department of Health and the Environment-CDPHE) as well as federal (Mining Health and safety Administration-MSHA). Cyanide will be destroyed, and metals of concern will be treated using the lime used in the milling process. CJK is required by law to comply with all regulations associated with the handling and use of hazardous materials and will use these industry-proven methods.

Step 2: Cyanide Destruction.

Most of the CN used in the process is reclaimed and re-used. However, the CN that cannot be reclaimed will be destroyed using ferric sulfite prior to disposal in the TSF. The cyanide detoxification process is an industry-proven method. CN concentration in the TSF will be at a safe level, on the order of 1 parts per million (ppm).

Step 3: Zero Discharge Facility.

The Leadville Mill was designed and permitted as a zero-discharge facility. No CDPHE discharge permit is required. Any discharge from the tailings dam is a CDPHE violation.

Experience. CJK is also in agreement with the District with respect to having experienced personnel working at the mill and agrees to commit to demonstrating this as a condition to permit approval.

Objection 3: Air Quality

The Applicant's expanded operations and handling of ore threaten to impact the District's wastewater treatment facility with airborne heavy metals and toxic particulates in the form of fugitive dust leaving the Applicant's property. To the District's knowledge, although the Leadville Mill may have been permitted to process 200 tons per day, it rarely ran continuously at anything

near that amount of throughput. The amount of particulates leaving the Mill property will be much higher than it ever was in the past.

Section 4.2.6 of the Application addresses dust control, but only within the Mill buildings. The Application also indicates that two ore stockpiles will be located immediately to the west of the District's polishing pond. Application, Exhibit C, Figure 3-3. The District is concerned that handling large amounts of ore outside will lead to dust blowing onto its polishing pond and aeration basin, potentially impacting its water quality and operations.

Dust from the road running next to the District's property boundary and polishing pond is also a concern. At a minimum, this road should be paved. The District is already hard pressed to meet compliance limits imposed by CDPHE. See JVA Memo.

CJK: CJK are also regulated by CDPHE and must meet the same standards as all other operators. The APEN notifications have been submitted but have not yet been received. As such, CJK cannot provide definitive air quality requirements as of the date of this document. APENs are a condition of permit approval by CDRMS.

There are 3 ore-bearing stockpiles near the Sanitation boundary. These (currently covered) stockpiles are legacies from the original operators. CJK is required to remove these piles within 60 days of commencement of operations. CJK does not intend to stockpile ore in this area.

There is also one topsoil pile near the Sanitation Facility property. This has been seeded and is being stored for final reclamation.

The operating plan calls for a maximum (800 tons) of ore to be on the surface, near the new crusher building (immediately East of the existing mill building). Dust mitigation measures will be in place Such as water sprays, wind barriers, and storage bunkers have are being considered

CJK would be interested in Leadville Sanitation's air quality data for baselining (since your facility is down-wind of ours), if you are willing to share this with us.

CJK is also open in discussing the option of paving the access road though proposed mitigation measures are acceptable to CDHPE.

Objection 4: Tailings Storage Facility

The Application indicates that the TSF will be completed in the spring of 2021. Was it? It will also be based on stability analysis performed by CTL Thompson a decade ago. Application, Exhibit D, Section 4.3, and Appendices 22-5 and 22-6. The District has concerns about whether the work was done according to plan and whether such old engineering is sufficient. Moreover, the technical specifications for the TSF, including its liner, are not as robust as those for solid waste facilities elsewhere that contain materials less hazardous than those the Applicant will be handling. The District is concerned that the TSF could fail, leading to leakage of contaminants into groundwater and the District's collection system. See JVA Memo.

The Application states that a leak detection system for the TSF will be installed in the spring of 2021. If cyanide leachate is detected in groundwater, then the groundwater will be pumped back into the impoundment and DRMS will be notified within 48 hours. Section 4.3.6 of the Application does not say anything, however, about stopping operations or fixing the leak.

The District also understands that there was a recent rain event that caused one of the Applicant's ponds partially to collapse. Such an incident concerns the District about the

Applicant's ability to build and operate expanded milling in a way that will not affect the District's facilities.

CJK: The TSF design was reviewed and approved by CDRMS in 2011. CDRMS has not objected to CJK's construction plan for 2021. CJK retained a contractor to complete the facility in Spring of 2021. However, contractor scheduling delays have slipped the schedule for mid-September start. Materials are in place, final grading to prep the surface for the liner is currently underway. Ultimately, however we are tied to our contractor's schedule for liner installation.

Objection 5: Seismic Impacts

The District is also concerned about the potential damage to its facilities from the Applicant's seismic activity. The District's wastewater treatment facility consists of a headworks for screening and grit removal, two aeration basins, two covered clarifiers, a polishing pond, and a chlorine contact chamber for disinfection. The Applicant's operation of heavy crushing equipment next door to the District's infrastructure threatens to crack foundations and pipelines that the District needs to operate its water treatment facilities. The District is further concerned that the new crusher facility and doubling the permitted crushing capacity on the Applicant's property could destabilize the Tailings Storage Facility. See JVA Memo.

As explained in the JVA Memo, the District is under a compliance schedule to reduce inflow and infiltration into its collection system. The increased seismic activity nearby could also affect the District's efforts to reduce inflow and infiltration. Damage to the collection system could result in seepage of wastewater into the ground.

Again, the most recent analysis on geotechnical stability dates from 2011, a decade ago and well before the Applicant's recent proposal to increase the size of its operations. Application, Appendices 22-5 and 22-6.

CJK:

Crusher Vibration

A vibration assessment will be conducted during plant start-up to test the vibration at representative locations.

Geotechnical Summary

CJK's site engineer has confirmed the TSF design and constructed in accordance with the approved plan. The calculated safety factor for the structure at full capacity ranges between 2.3 and 2.8. State regulations require a safety factor of no less than 1.0 for water dams. The geotechnical information is presented in the recently submitted CDRMS permit application Appendix 22-1. If further information is requested, we suggest arranging a meeting to mutually discuss and share the technical foundation for CJK's mill activities and Lake County Sanitation's geotechnical facility concerns

Geologic Hazards

Geologic mapping by the United States Geological Survey (USGS) indicates that the property is underlain by alluvium. Our subsurface investigation encountered material consistent with this interpretation. The surface and near surface soils are vulnerable to erosion especially from concentrated flows. The Civil Engineer should address control of surface drainage. Faults are mapped in the Leadville area. A map published by the Colorado Office of Emergency Management in 1999 shows the most recent movement of the faults occurred in the late to middle Quaternary (130 thousand to 750 thousand years ago). The area is considered by the 1997 Uniform Building Code (UBC) its least active zone designation.

Lake County, CO has a low earthquake risk, with a total of 1 earthquake since 1931. The USGS database shows that there is a 3.53% chance of a major earthquake within 50km of Lake County, CO within the next 50 years. The largest earthquake within 30 miles of Lake County, CO was a 3.1 Magnitude in 1993. There is less than 0.08% of a chance of an earthquake of 7.0 would occur over the next 50 years.

The unconsolidated soil beneath the tailings is not expected to respond unusually to seismic activity or mill operations. CJK has not identified site geologic hazards that will affect tailings pond and embankment stability.

Objection 6: Access Agreement

The District understands that the Applicant does not have access to its property for the operations that it plans. As shown in Figures 3-1 and 3-2 in the Application, Al Phillips owns the strip of land between the Applicant's property and Highway 24. He previously gave permission orally to the Applicant's predecessor allowing access but told the Applicant that he would allow access across his land only for 200 tons of material (not 200 tons per day). The fact that the Applicant does not have legal access to its property for the expansion of operations is another reason the permit conversion should be denied.

In addition, the Applicant does not have permission from the Colorado Department of Transportation to truck 400 tons per day of ore into its property. For so much truck traffic it may be necessary to install a deceleration lane on Highway 24, which may have to be built on Mr. Phillips's land. He objects to the taking of his land for such construction.

CJK: CJK has an access agreement with Philips to use the existing drive. CDOT and Philips have approved material haulage.

Objection 7: Financial Warranty

Under Rule 1.11.2 of the Mined Land Reclamation Board, "[a]ll warranty and permit processing requirements shall apply as though the Conversion application were a new permit application." The Applicant has not demonstrated in its Application that the amount of the financial warranty will be sufficient to cover reclamation, especially if there is leakage or other problems at the facility.

Rule 4.2.3 provides that "[t]he conversion of any 110 Permit into any 112 Permit shall require a Financial Warranty in an amount equal to the estimated cost of reclamation." In Section 12.1 of the Application the Applicant estimates that reclamation will cost \$77,258, but in Appendix 12-1 it estimates the total reclamation cost to be \$85,636 and leaves a blank for the cost for cyanide and "OTHERS?" for monitoring wells. Regardless of which of these numbers is the one proposed, anything under \$100,000 seems wildly optimistic for reclaiming a major milling site and ensuring that the District and other neighbors will not be stuck with paying for any environmental damage caused by the Mill. C.R.S. § 34-32-117(4) (financial warranty should cover water quality protection, treatment and monitoring).

In addition, the Application does not address how long the financial warranty will remain in place and what conditions must be met in order to release it. The Applicant should not be able to walk away from the site simply after capping the TSF. There should be ongoing monitoring of water quality for a long period of time after operations have ceased to ensure that residual cyanide leachate or other pollution is not affecting the District or surrounding community.

Further, Rule 6.4.19 applies because the Applicant's affected lands lie within 200 feet of a significant, valuable and permanent man-made structure, namely the District's polishing pond and sewage pipeline infrastructure. Rule 6.4.19 provides that the Applicant must do one of three things: (a) provide a notarized agreement between the Applicant and the person having an interest in the structure for compensation for any damage done; (b) where such an agreement cannot be reached, the Applicant shall provide an appropriate engineering evaluation demonstrating that the structure will not be damaged by the Applicant's activities; or (c) where the structure is a utility, the Applicant may supply a notarized letter, on utility letterhead, that the Applicant's activities will have "no negative effect" on the utility. First, there is no agreement between the Applicant and the District. Second, the Applicant has not provided any engineering evaluation referring to the District's polishing pond or sewage pipeline infrastructure. Third, the District does not agree that the Applicant's operation will have no negative effect and has not supplied any letter to that effect. The Application should be denied for failure to comply with Rule 6.4.19.

A further concern relates to the complicated and opaque corporate structure of the Applicant and the owner of the Leadville Mill, which also dictates that a sufficient financial warranty be posted for as long as it takes to assure there is no environmental damage.

CJK: The financial warranty is for facility final reclamation tasks cease. The value presented to CDRMS is an estimate from CJK's consultant and is currently under CDRMS review. However, ultimately, this quantum is reviewed by CDRMS and its experts and adjusted to what will ultimately be the final bond amount. This bond must be in place for permit approval and is modified periodically and updated to account for changes in reclamation bond cost adjustments

The State determines how long the bond remains in place after closure. There is not a definitive time limit. The bond remains in place until the State is satisfied with closure reclamation is complete.

The District, through its legal counsel made it clear in 2011 and currently that it will not sign a Structural Agreement. CJK's engineering report is included in the permit document. CJK will follow up on this with CDRMS and respond as appropriate.

The State clearly dictates the terms of the financial warranty and will not grant the permit until all requirements are met.

Objection 8: Transparency of Communication

The Applicant has not been forthcoming or transparent about describing its plans for expansion. On November 19, 2020, the Applicant sent the District a letter asking the District to sign a Structure Agreement without any explanation about what the Applicant was planning to do. Instead of just signing the agreement, the District asked for information about the Applicant's plans for expanding its operations. The Applicant said that it would send information later, but the District received nothing. Instead, the District learned for the first time about the revised Application involving cyanide processing through a newspaper article in July 2021. To date the District still has not received current information about the Applicant's plans from the Applicant. Good neighbors talk to each other. The Applicant has not been a good neighbor.

CJK: CJK requested and was granted a place on the agenda at a scheduled board meeting on March 3, 2021. The purpose of the request was to discuss and provide an overview of our plans for the Mill and most importantly to discuss future water needs and possible synergies with the District to supply water using an upgraded water line capable of meeting future water

requirements due to growth on the community. Note that this possible need for a new water line was conveyed to us during our discussions with Parkville Water. The District showed little interest in our operation or our tentative proposal, so the matter was dropped.

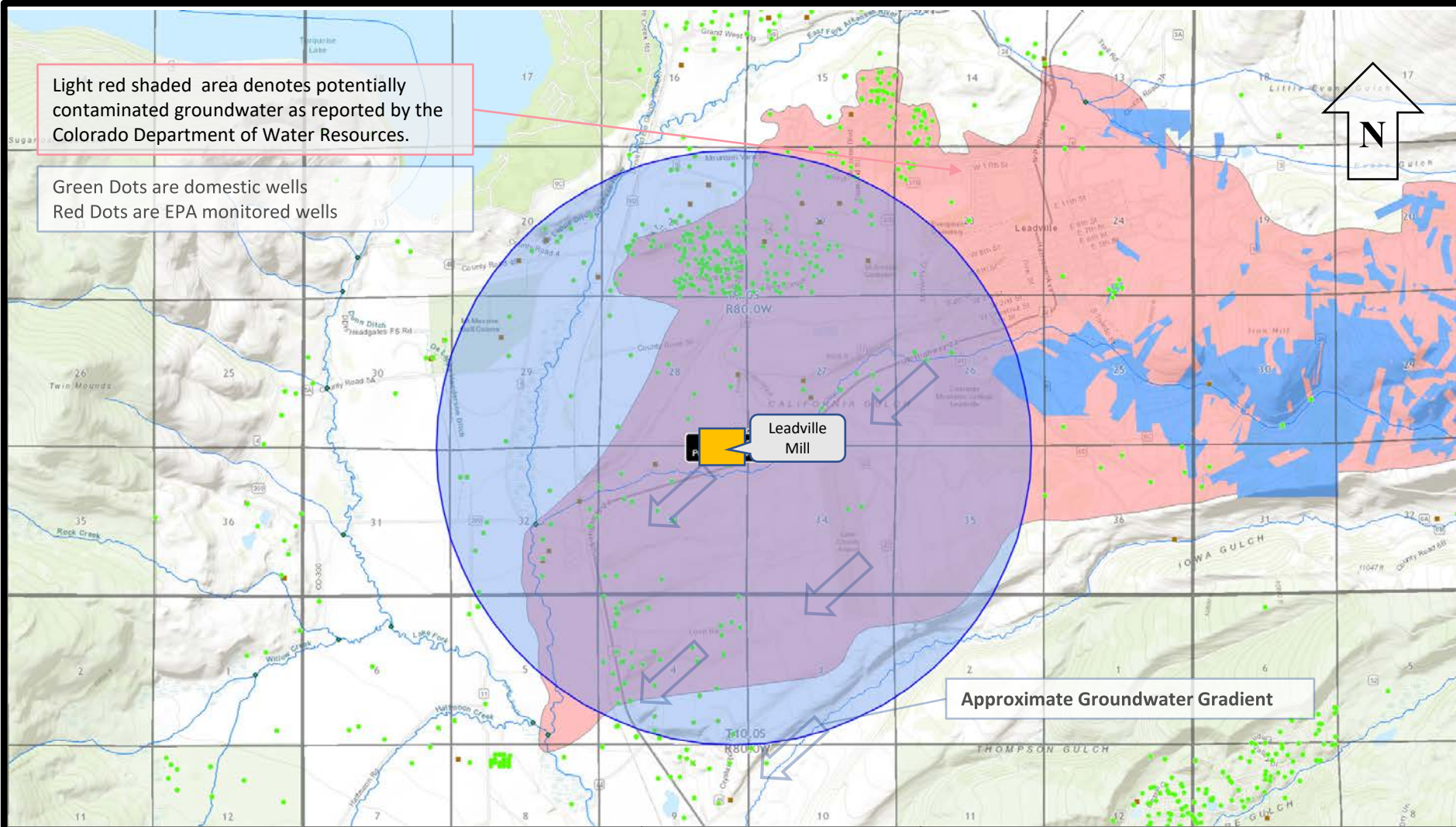
The District's counsel did contact CJK when they received the Structure Agreement Letter. And CJK did agree to provide detailed information. However, given the clear sensitivity of this matter CJK believes it is prudent to provide accurate detailed information to the public. The most sensitive part of our flowsheet is the cyanide circuit. This has been designed by experienced engineers and provided to CDRMS for approval. CDRMS in its initial review deemed our application as "complex" due to the proposed use of cyanide and as a result has extended the time to review the application. It is possible that CDRMS may require changes to our design, which if CJK had provided earlier details, would have to rescind, causing frustration in the community. Hence the delay in providing the District as well other with details.

Nevertheless, as we near completion of our engineering and permitting work, we will, reach out to the community in general to provide a clear, and most importantly accurate discussion of our environmental remediation projects.

Sincerely,
FOR CJK MILLING COMPANY LLC

[signed]

by:
Steven Craig
Member, Union Milling Contractors



CJK Milling LLC

Source: Colorado Department of Water

Figure 1

Groundwater Wells Within 2 Miles of Leadville Mill